

# Service Manual

## Hybrid Control Panel / Multi Hybrid Control Panel AW-RP501/AW-RP505



AW-RP501



AW-RP505

## SPECIFICATIONS

### [AW-RP501]

|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Source Voltage :</b>                 | 12 V DC (DC jack)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Power Consumption :</b>              | 12V, 0.7A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Video Input :</b>                    | 1.0 V[p-p] composite/75 $\Omega$ (BNC connector)                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Genlock Input :</b>                  | black burst<br>75 $\Omega$ loop through with auto terminator (BNC connector)                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Video Output :</b>                   | 1.0 V[p-p] composite/75 $\Omega$ x 2 (BNC connector)                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>S-video Output :</b>                 | Y: 0.7 V[p-p] (75 $\Omega$ )<br>C: 0.3 V[p-p] burst level chrominance/75 $\Omega$ (S-VIDEO connector)                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Genlock Output :</b>                 | 75 $\Omega$ (BNC connector)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Camera Control Output :</b>          | Control signal (BNC connector)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Pan/tilt Control Output :</b>        | Control signal (RJ-45 8P modular jack)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>System Tally Input :</b>             | Tally signal (2 pin Terminal block)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Auxiliary Control Input :</b>        | Control signal (8 pin DIN connector)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Switches :</b>                       | Power ON/OFF Switch, GAIN HIGH/MID/LOW Switch, GAIN AGC/MANU Switch, MODE BAR/CAM switch, SHUTTER Switch, AUTO/ATW ATW switch, AUTO/ATW A switch, AUTO/ATW B switch, AWC Switch, ABC Switch, G/L PHASE ON/OFF Switch, G/L PHASE Coarse Switch, IRIS AUTO/MANU Switch, MEMORY Switch, PRESET Switch, DEF Switch, WIP Switch, H/F Switch, EXT Switch, ND Switch, OP Switch, SPEED Switch, SPEED SW CHANGE Switch, ZOOM REVERSE Switch, ZOOM/FOCUS EXCHANGE Switch, FOCUS REVERSE Switch, TILT REVERSE Switch, PAN REVERSE Switch |
| <b>Controls :</b>                       | T. PED Control, G/L PHASE SC Control, G/L PHASE H Control, CABLE COMP Y Control, CABLE COMP C Control, IRIS LEVEL Control, ZOOM Lever, FOCUS Lever, PAN/TILT Lever                                                                                                                                                                                                                                                                                                                                                             |
| <b>Pan/tilt Head Connecting Cable :</b> | x 4 (Coaxial Cable 3 pcs., 10BASE-T straight cable 1 pc.)(In case of using G/L function)                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Maximum cable length :</b>           | 500 m (In case of using coaxial cables 5C-2V and 10BASE-T cable UTP category-5)                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Operating temperature :</b>          | -10°C to +45°C (14°F to +113°F)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Dimensions :</b>                     | 210 (W) x 88 (H) x 177 (D) mm [8-1/4" (W) x 3-1/2" (H) x 7" (D)]                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Weight :</b>                         | 2.2 kg (4.9 lbs.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Finish :</b>                         | AV Ivory painting                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

# Panasonic

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## **WARNING**

This service information is designed for experienced repair technicians only and is not designed for use by the general public.

It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.

Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

|                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <b>CAUTION</b><br><small>RISK OF ELECTRIC SHOCK<br/>DO NOT OPEN</small>  |  <p>This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any inside part of this unit.</p> |
| <b>CAUTION:</b><br>TO REDUCE THE RISK OF ELECTRIC SHOCK,<br>DO NOT REMOVE COVER (OR BACK). NO USER<br>SERVICEABLE PARTS INSIDE.<br>REFER SERVICING TO QUALIFIED SERVICE<br>PERSONNEL                                                        |  <p>This symbol alerts the user that important literature concerning the operation and maintenance of this has been included. Therefore, it should be read carefully in order to avoid any problems.</p>                     |

### **IMPORTANT SAFETY NOTICE**

There are special components used in this equipment which are important for safety. These parts are indicated by the "△" mark on the schematic diagram and the replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacture.

## **[AW-RP505]**

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Source Voltage :</b>          | 12 V DC (DC jack)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Power Consumption :</b>       | 12 V, 0.5 A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Preview Video Input :</b>     | 1.0 V[p-p] composite/75Ω (BNC connector)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Genlock Input :</b>           | black burst                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|                                  | 75Ω loop through with auto terminator (BNC connector)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Preview Video Output :</b>    | 1.0 V[p-p] composite/75Ω (BNC connector)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Genlock Output :</b>          | 75Ω (BNC connector)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Camera Control Output :</b>   | Control signal (BNC connector)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Pan/tilt Control Output :</b> | Control signal (RJ-45 8P modular jack)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>System Tally Input :</b>      | Tally signal (6 pin Terminal block)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Auxiliary Control Input :</b> | Control signal (8 pin DIN connector)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Switches :</b>                | Power ON/OFF Switch, CAM CONT Switch, GAIN HIGH/MID/LOW Switch, GAIN AGC/MANU Switch, SCENE FILE Switch, CONTROL Switch, LAMP Switch, MODE BAR/CAM Switch, SHUTTER Switch, AUTO/ATW ATW Switch, AUTO/ATW A Switch, AUTO/ATW B Switch, AWC Switch, ABC Switch, G/L PHASE ON/OFF Switch, G/L PHASE Coarse Switch, IRIS AUTO/MANU Switch, MEMORY Switch, PRESET Switch, DEF Switch, WIP Switch, H/F Switch, EXT Switch, ND Switch, OP Switch, SPEED Switch, T. PED Control, G/L PHASE SC Control, G/L PHASE H Control, IRIS LEVEL Control, ZOOM Lever, FOCUS Lever, PAN/TILT Lever |
| <b>Controls :</b>                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Multiport Hub Connecting</b>  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Cable :</b>                   | x 4 (Coaxial Cable 3 pcs., 10BASE-T straight cable 1 pc.)(In case of using G/L function)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Maximum cable length :</b>    | 10 m (In case of using coaxial cables 5C-2V and 10BASE-T straight cable UTP category-5)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Operating temperature :</b>   | -10°C to +45°C (14°F to +113°F)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Dimensions :</b>              | 210 (W) x 88 (H) x 177 (D) mm [8-1/4" (W) x 3-1/2" (H) x 7" (D)]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Weight :</b>                  | 2.2 kg (4.9 lbs.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Finish :</b>                  | AV Ivory painting                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

Weight and dimensions indicated are approximate.  
Specifications are subject to change without notice.

## **ACCESSORIES**

|                    |   |                       |    |
|--------------------|---|-----------------------|----|
| Seal .....         | 1 | Mounting screws ..... | 12 |
| Rack angle .....   | 2 | M4 x 8mm .....        | 8  |
| Connect plate..... | 1 | M5 x 8mm .....        | 4  |

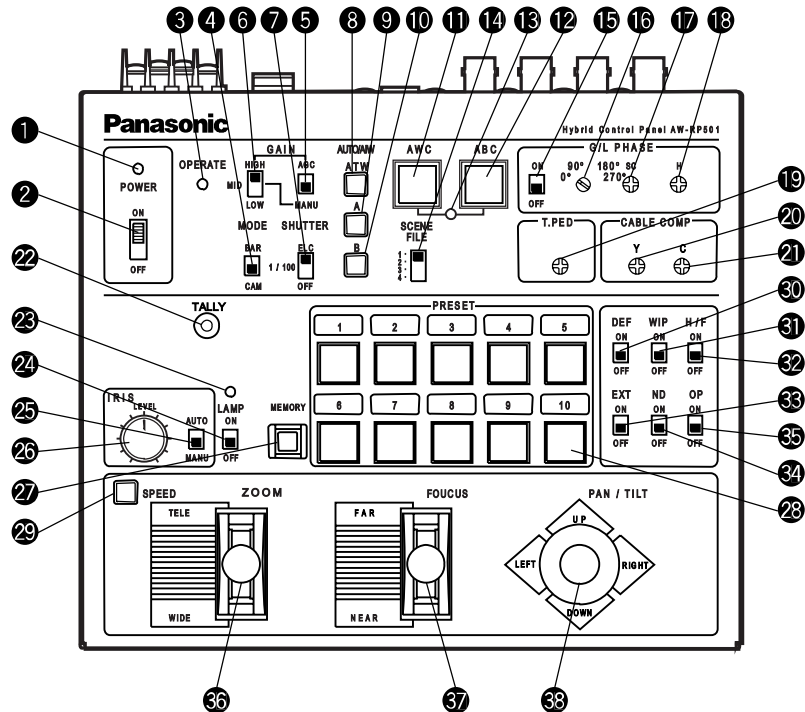
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# MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS

## [AW-RP501]

### ■ Control Panel



#### ❶ Power Indicator [POWER]

Lights red when POWER ON/OFF Switch ❷ is in the ON position, and goes out when the same switch is set to the OFF position.

#### ❷ Power Control Switch [POWER, ON/OFF]

The camera and pan/tilt head are switched on when this switch is set to the ON position. (The power indicator lights.) The camera and pan/tilt head are partially switched off when this switch is set to the OFF position.

**Note:** When the switch is set to the OFF position, the camera is totally switched off but the communication line between the pan/tilt head and this control panel remains live. To disconnect all power supply, pull out the power plug from the electrical outlet.

#### ❸ Operating Indicator [OPERATE]

Lights green when communication begins normally between the camera and the control panel, and goes out if a communication error occurs.

#### ❹ Mode Selection Switch [MODE, BAR/CAM]

Used to select camera colour bar signals or camera video signals. With the switch set to BAR, the control panel outputs colour bar signals from the video output terminal. When the switch is set to CAM, it outputs camera video signals.

#### ❺ AGC Selection Switch [GAIN, AGC/MANU]

Keep this switch in the AGC position if you want to keep automatic gain control. When this switch is at AGC, GAIN H/M/L Switch ❻ is invalid.

#### ❻ High Gain Selection Switch [GAIN, HIGH/MID/LOW]

This switch is valid only when GAIN AGC/MANU Switch ❺ is in the MANU position. Normally, keep it in the LOW position. When the camera is used in a dark place or when video output level is not high enough even if the iris is wide open, set the switch to the MID or HIGH position.

● **Electronic Shutter Speed Selection Switch**  
[SHUTTER, ELC/ 1/100 /OFF]

Used to select a mode of camera electronic shutter control. With the switch in the ELC position, the electronic shutter is controlled and the camera sensitivity is automatically adjusted when using the camera in a bright place. The shutter speed is 1/100 second when the switch is in the 1/100 position. The electronic shutter is off when the switch is in the OFF position.

● **White Balance ATW Selection Switch**  
[AUTO/ATW, ATW]

When the switch is depressed, the camera keeps automatically adjusting white balance. The switch lights when it is selected.

● **White Balance Ach Selection Switch**  
[AUTO/ATW, A]

When this switch is depressed, white balance will be as stored in Channel A of the camera. The switch lights when it is selected. When AWC Switch ⑪ is pressed after selecting AUTO/ATW, A, white balance is automatically adjusted and stored in Channel A.

● **White Balance Bch Selection Switch**  
[AUTO/ATW, B]

When this switch is depressed, white balance will be as stored in Channel B of the camera. The switch lights when it is selected. When AWC Switch ⑪ is pressed after selecting AUTO/ATW, B, white balance is automatically adjusted and stored in Channel B.

● **Auto White Start Switch [AWC]**

If this switch is pressed when AUTO/ATW A Switch ④ or AUTO/ATW B Switch ⑤ is selected, white balance is automatically adjusted. The adjustment results are stored in Channel A or B. This switch is invalid if the MODE BAR/CAM Switch ① is in the BAR position. Auto Set Indicator ⑬ flashes while AWC is in operation, and goes out when white balance has been properly adjusted. Auto Set Indicator ⑬ remains lit if white balance adjustment fails.

**Note:** White balance may not be adjustable if there is no white in the image being taken by the camera. For details, refer to the Operating Instructions for the Camera.

● **Auto Black Start Switch [ABC]**

When this switch is depressed, the lens iris is automatically closed to set black balance. Be sure to keep the IRIS AUTO/MANU Switch ② in the AUTO position in setting black balance. Auto Set Indicator ⑬ flashes while ABC is in operation, and goes out when black balance has been properly adjusted. Auto Set Indicator ⑬ remains lit if black balance adjustment fails. Black balance adjustment may fail if the total pedestal is too low. In such a case, adjust the total pedestal with T.PED Control ⑭ (referring to the OPERATING PROCEDURES at page 25) and try to adjust black balance again.

● **Auto Set Indicator**

This LED flashes during white balance or black balance adjustment with AWC Switch ⑪ or ABC Switch ⑫ depressed, and goes out when the adjustment has ended normally. The LED remains lit if balance adjustment fails.

● **Scene File Selection Switch [SCENE FILE, 1/2/3/4]**

Select a scene file preset on the camera side. Remember, however, that [4] is camera scene file USER A or USER B (provided that WV-E550 or AW-E560 is connected).

● **Genlock Phase Control Switch**  
[G/L PHASE, ON/OFF]

Used to adjust the genlock phase in operating the camera in external sync mode. Set the switch to the ON position only when adjusting the genlock subcarrier phase or genlock horizontal phase. Otherwise, keep the switch in the OFF position.

● **Genlock Subcarrier Phase Coarse Switch**  
[G/L PHASE, 0°/90°/180°/270°]

Used for coarse adjustment of the colour phases of genlock input and video output signals in operating the camera in external sync mode. Used in combination with G/L PHASE SC Control ⑮, the switch has an adjustment range of over 360°. Set G/L PHASE ON/OFF Switch ⑮ to the ON position before adjusting the colour phases with this switch.

**17 Genlock Subcarrier Phase Fine Control**  
**[G/L PHASE, SC]**

Used for fine adjustment of the colour phases of genlock input and video output signals in operating the camera in external sync mode. Use this switch in combination with G/L PHASE Coarse Switch 16. Set G/L PHASE ON/OFF Switch 18 to the ON position before adjusting the colour phases with this switch.

**18 G/L Horizontal Phase Adjustment Control**  
**[G/L PHASE, H]**

Used to adjust the horizontal phases of genlock input and video output signals in operating the camera in external sync mode. Set G/L PHASE ON/OFF Switch 18 to the ON position before adjusting the horizontal phases with this switch.

**19 Total Pedestal Level Control [T. PED]**

The set pedestal level of the camera's Y (luminance) signal can be adjusted. This control is used in a system of two or more cameras to adjust the pedestal levels of these cameras. The control may operate not continuous sometimes due to digital signal processing.

**20 Cable Compensation Luminance Control**  
**[CABLE COMP, Y]**

Used to adjust the Y (luminance) signal level of video output signals as appropriate to the cable length between the pan/tilt head and this control panel. To adjust it, first set MODE BAR/CAM Switch 1 to the BAR position, then connect a waveform monitor, vectorscope, or other measuring instrument to the video signal output. If the cable between the pan/tilt head and this control panel is longer than 300 meters, set the cable compensation switch on the pan/tilt head to the ON position in advance. (For details, refer to the OPERATING PROCEDURES at page 25 or to the Operating Instructions for the Pan/tilt Head.) First, adjust the Y (luminance) signal level with this control, then adjust the C (chrominance) signal level with CABLE COMP C Control 21.

Repeat this until the video output level of this control panel matches the camera output level.

Turning this control changes not only the Y (luminance) signal level but also the whole video signal level.

**21 Cable Compensation Chrominance Control**  
**[CABLE COMP, C]**

Used to adjust the C (chrominance) signal level of video output signals as appropriate to the cable length between the pan/tilt head and this control panel. To adjust it, first set MODE BAR/CAM Switch 1 to the BAR position, then connect a waveform monitor, vectorscope, or other measuring instrument to the video signal output. If the cable between the pan/tilt head and this control panel is longer than 300 meters, set the cable compensation switch on the rotary head to the ON position in advance. (For details, refer to the OPERATING PROCEDURES at page 25 or to the Operating Instructions for the Pan/ Tilt Head.) First, adjust the Y (luminance) signal level with CABLE COMP Y Control 20, then adjust the C (chrominance) signal level with this control. Repeat this until the video output level of this control panel matches the camera output level.

**22 Tally Indicator [TALLY]**

Lights red when a tally signal is input to TALLY Terminal 23 from a Special Effect Generator (SEG) or video switcher.

**23 Lamp Indicator [LAMP]**

Lights red when LAMP ON/OFF Switch 24 is in the ON position. Flashes if the lamp connected to the AC Adapter (AW-PS300) for pan/tilt head is broken. Goes out when LAMP ON/OFF Switch 24 is set to the OFF position.

**Note:** Use a halogen lamp of 250 W to 500 W to connect to the Pan/tilt Head AC Adapter (AW-PS300). If a lamp of lower than 250 W is connected to it, the LED may flash when LAMP ON/OFF Switch 24 is in the ON position even though the lamp is not broken.

**24 Lamp Switch [LAMP, ON/OFF]**

Switches on and off the halogen lamp connected to the lamp AC receptacle of the Pan/tilt Head AC Adapter (AW-PS300). Set it to the ON position to switch the halogen lamp on (in which case, the lamp LED flashes). Set it to the OFF position to switch the halogen lamp off.

**25 Lens Iris Selection Switch [IRIS, AUTO/MANU]**

When this switch is in the AUTO position, the lens iris is automatically controlled according to the quantity of light entering the lens.

When the switch is in the MANU position, the iris can be manually controlled over the range from the closed position to the fully open position using IRIS LEVEL Control ④.

Set the switch to the MANU position in storing iris data in PRESET Switches ⑤ with MEMORY Switch ⑥. If the switch is in the AUTO position, iris data will not be stored in the memory.

#### ④ Lens Iris Control [IRIS, LEVEL]

When IRIS AUTO/MANU Switch ④ is in the MANU position, the iris can be controlled over the range from the closed position to the fully open position using this control. Turning it clockwise opens the iris and turning it counterclockwise closes the iris.

If the camera is preset to AUTO IRIS ADJ ON when IRIS AUTO/MANU Switch ④ is in the AUTO position, this control may be used for fine adjustment of ALC focus level. For details, refer to the Operating Instructions for the Camera.

If the preset memory is called by pressing PRESET Switches ⑤ when IRIS AUTO/MANU Switch ④ is in the MANU position, the iris is adjusted to the preset value stored in the memory regardless of the position of this control. If the control is turned after that, the iris is adjusted corresponding to the position of the control.

#### ⑥ Preset Memory Switch [MEMORY]

Head pan/tilt positions, lens zoom/focus/iris (provided that IRIS AUTO/MANU Switch ④ is in the MANU position), and camera white balance (ATW Channel A or B) can be preset in up to 10 memory buttons.

To preset them in these buttons, first select a head pan/tilt position, lens zoom/focus/iris, or camera white balance (ATW or Channel A or B); press MEMORY Switch ⑥ (so it lights yellow green and all the 10 buttons of PRESET Switches ⑤ flash); while keeping the MEMORY Switch ⑥ depressed, press one of the 10 buttons of PRESET Switch ⑤ as desired. The pressed button in which the selected item is stored lights.

#### ⑤ Preset Position Selection Switches [PRESET]

The head pan/tilt positions, lens zoom/focus/iris, and camera white balance that are stored in the buttons of PRESET Switch ⑤ can be recalled to operate the pan/tilt head, the lens, and the camera according to the preset data.

To preset them in the PRESET switches, first select a head pan/tilt position, lens zoom/focus/iris, or camera white balance (ATW or Channel A or B); press the MEMORY Switch ⑥ (so it lights yellow green and all the 10 buttons of PRESET Switches ⑤ flash); at the same time press one of the 10 buttons of PRESET Switches ⑤ as desired. The pressed button in which the selected item is stored lights.

#### ③ Speed Selection Switch [SPEED]

If ZOOM lever ③, FOCUS Lever ⑦, or PAN/TILT Lever ⑧ is moved while keeping SPEED Switch ③ depressed, the corresponding operation takes place at low speed, provided that SPEED SW CHANGE Switch ③ is in the LOW position. If one of these levers is moved with SPEED Switch ③ depressed when SPEED SW CHANGE Switch ③ is in the HIGH position, the corresponding operation takes place at high speed. SPEED Switch ③ remains lit while it is kept depressed.

#### ② Defroster Switch [DEF, ON/OFF]

If this switch is connected to a pan/tilt head with a built-in defroster function, it switches on and off the defroster.

#### ① Wiper Switch [WIP, ON/OFF]

If this switch is connected to a pan/tilt head with a built-in wiper function, it switches on and off the wiper.

#### ④ Heater/Fan Switch [H/F, ON/OFF]

If this switch is connected to a pan/tilt head with a built-in heater or fan function, it switches on and off the heater or fan.

#### ③ Lens Extender Switch [EXT, ON/OFF]

If this switch is connected to a lens with a built-in extender function, it switches on and off the lens extender. For details, refer to the Operating Instructions for the Lenses and Pan/tilt Head.

#### ② ND Filter Switch [ND, ON/OFF]

If this switch is connected to a lens with a built-in ND filter function, it switches on and off the ND filter. For details, refer to the Operating Instructions for the Lenses and Pan/tilt Head.

### ● Option Switch [OP, ON/OFF]

Controls the option switch terminal on the Pan/tilt Head AC Adapter (AW-PS300) to short circuit or open it. That is, the option switch terminal is shorted when OP ON/OFF Switch ● is in the ON position, or is opened when it is in the OFF position. For details, refer to the Operating Instructions for the Pan/tilt Head AC Adapter.

### ● Zoom Lever [ZOOM, TELE/WIDE]

Controls the lens zoom. Zoom speed varies according to the angle of the lever. The lens moves toward TELE when the lever is moved toward TELE, or toward WIDE when the lever is moved toward WIDE, provided that ZOOM REVERSE Switch ● is in the NOR position. When ZOOM REVERSE Switch ● is set to the REV position, the lens moves in the opposite direction. ZOOM/FOCUS EXCHANGE Switch ● may be used to exchange its function with FOCUS Lever ●.

### ● Focus Lever [FOCUS FAR/NEAR]

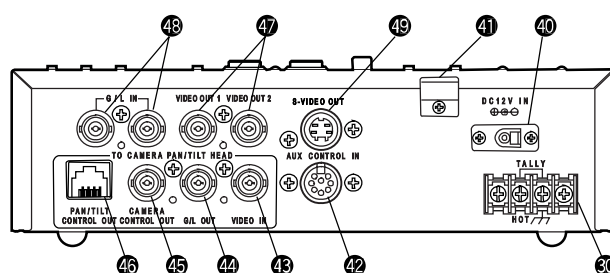
Used to adjust the lens focus at varying speed depending on the angle of the lever. The lens is focused far when the lever is moved toward FAR, or near when the lever is moved toward NEAR, provided that FOCUS REVERSE Switch ● is in the NOR position. When FOCUS REVERSE Switch ● is set to the REV position, the lens focus operates in the opposite direction. ZOOM/FOCUS EXCHANGE Switch ● may be used to exchange its function with ZOOM Lever ●.

### ● Pan/tilt Lever [PAN/TILT, UP/DOWN/LEFT/RIGHT]

Controls the head's pan/tilt operation at varying speed depending on the angle of the lever. The pan/tilt head turns up when the lever is moved toward UP, or down when it is moved toward DOWN, provided that TILT REVERSE Switch ● is in the NOR position. The pan/tilt head moves in the opposite direction if the TILT REVERSE Switch ● is in the REV position. The pan/tilt head turns leftward when the lever is moved toward LEFT, or rightward when it is moved toward RIGHT, provided that PAN REVERSE Switch ● is in the NOR position. The pan/tilt head moves in the opposite direction if the PAN REVERSE Switch ● is in the REV position.

**Note:** TILT REVERSE Switch ● and PAN REVERSE Switch ● may be used to reverse the operating direction of the pan/tilt head, but be sure to set the operating direction of the pan/tilt head with its mounting direction selection switch during its installation depending on whether the pan/tilt head is mounted on the floor or is suspended. Unless the mounting direction selection switch on the pan/tilt head is properly set, the pan/tilt head will pan or tilt in the opposite direction and the pan/tilt head operation limiters will not be properly stored in the memory. For details on the setting of this switch, refer to INSTALLATION OF PAN/TILT HEAD at page 18 or the Operating Instructions for the Pan/tilt Head.

## ■ REAR PANEL



### ● TALLY Input Terminal [TALLY]

#### (2-pin Terminal Board)

Connect it to the tally connector on a special effect generator (SEG) or a video switcher, for example. When [HOT] terminal falls to ground level, TALLY Indicator ● and the tally indicator on the Pan/tilt Head (AW-PH300) light red.

### ● 12V DC Input Connector [DC 12V IN] (DC Jack)

Connect the AC Adapter AW-PS301 (optional).

### ● Cord Clamp (Clamper)

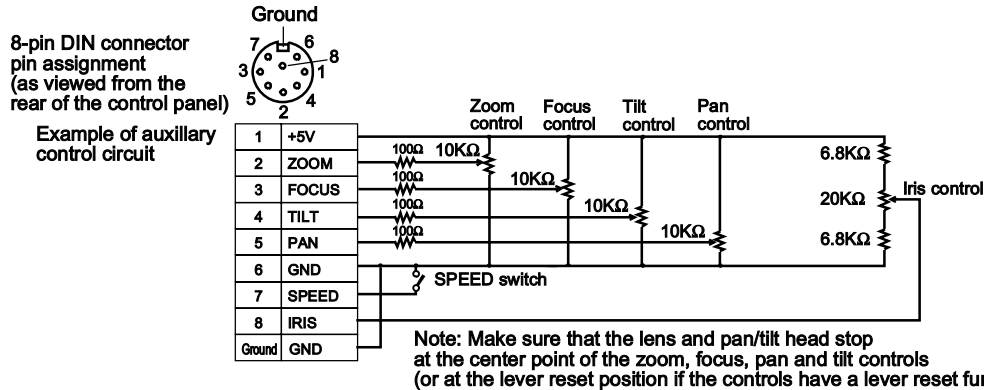
Clamps the DC cord of the AC Adapter AW-PS301 (optional) connected to DC 12V IN Connector ● to prevent its disconnection.

## ⑫ Auxiliary Control Input Connector

### [AUX CONTROL IN] (8-pin DIN Connector)

External control signals are input to this connector in controlling the head's pan/tilt, lens zoom, focus and iris operations.

**Note:** In externally controlling the pan/tilt head and lens through this connector, set IRIS LEVEL Control ⑬ on this control panel to the centre point (straight up), and do not simultaneously operate SPEED Switch ⑭, ZOOM Lever ⑮, FOCUS Lever ⑯, and PAN/TILT Lever ⑰. Operation errors may occur if external controls are simultaneously used.



## ⑬ VIDEO Input Connector

### [TO CAMERA PAN/TILT HEAD, VIDEO IN] (BNC Connector)

Connect it to the video output connector [VIDEO OUT] on the pan/tilt head with a coaxial cable (5C-2V or equivalent), which may be extended up to 500 meters.

## ⑭ Genlock Output Connector

### [TO CAMERA PAN/TILT HEAD, G/L OUT] (BNC Connector)

Connect it to the G/L input connector [G/L IN] on the pan/tilt head with a coaxial cable (5C-2V or equivalent) in operating the camera in external sync mode. The cable can be extended up to 500 meters.

## ⑮ Camera Control Output Connector

### [TO CAMERA, PAN/TILT HEAD CAMERA CONTROL OUT] (BNC Connector)

Connect it to camera control input connector [CAMERA CONTROL IN] on the pan/tilt head with a coaxial cable (5C-2V or equivalent), which may be extended up to 500 meters.

## ⑯ Pan/tilt Control Output Connector

### [TO CAMERA PAN/TILT HEAD, PAN/TILT CONTROL OUT] (RJ-45 8-pin Modular Jack)

Connect it to pan/tilt control input connector [P/T CONTROL IN] on the pan/tilt head with a 10BASE-T straight cable (UTP category 5 or equivalent), which may be extended up to 500 meters.

## ⑰ Video Output Connectors

### [VIDEO OUT 1, VIDEO OUT 2] (BNC Connector)

Video signals adjusted by the cable compensation circuit according to the cable length from the rotary head to the control panel are output. There are two output connectors to be connected to a monitor, special effect generator (SEG), VTR, or other video input devices with coaxial cables.

## ⑱ Genlock Input Connectors

### [G/L IN] (BNC Connector)

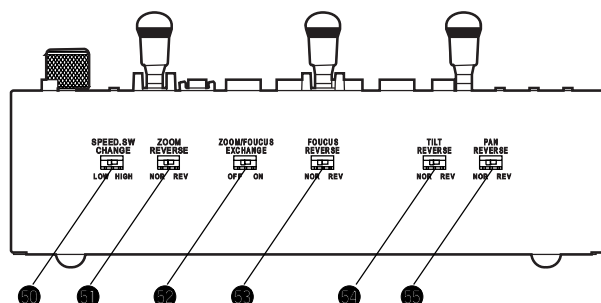
Black burst signals are input to one of the two connectors in operating the camera in external sync mode. The two connectors are automatically terminated, so input the above signals to one of them and use the other as a loop-through output.

## ⑲ S-Video Output Connector

### [S-VIDEO OUT] (4-pin S-Connector)

Y (luminance) and C (chrominance) signals are output. Connect it to the S-video input on a monitor or S-VHS VTR, for example.

## ■ Front Panel



### ● Speed Switch Changing Switch

#### [SPEED SW CHANGE, LOW/HIGH]

Changes the polarity of SPEED Switch ②. If ZOOM lever ⑤, FOCUS Lever ⑥, or PAN/TILT Lever ⑧ is moved while keeping SPEED Switch ② depressed, the corresponding operation takes place at low speed, provided that SPEED SW CHANGE Switch ⑤ is in the LOW position. If one of these levers is moved with SPEED Switch ② depressed when SPEED SW CHANGE Switch ⑤ is in the HIGH position, the corresponding operation takes place at high speed.

The speed polarity can also be changed by pressing SPEED Switch ② while keeping MEMORY Switch ③ depressed. When this step is taken again, the original speed polarity is restored. Take this step if it is difficult to shift SPEED SW CHANGE Switch ⑤ because this control panel is mounted on a console or the like.

### ● Zoom Reverse Switch

#### [ZOOM REVERSE, NORM/REV]

Changes the operating direction of ZOOM Lever ⑤. The lens zoom moves toward TELE when ZOOM Lever ⑤ is moved toward TELE, or toward WIDE when it is moved toward WIDE, provided that ZOOM REVERSE Switch ④ is in the NOR position. When ZOOM REVERSE Switch ④ is set to the REV position, lens zoom operation takes place in the opposite direction. With ZOOM REVERSE Switch ④ in the REV position, the operating directions shown on the panel are reversed. In this case, paste the supplied seal on the panel.

### ● Zoom/Focus Exchange Switch

#### [ZOOM/FOCUS EXCHANGE, ON/OFF]

ZOOM Lever ⑤ and FOCUS Lever ⑥ exchange their function between them when this switch is set to the ON position. Unless this exchange is needed, keep the switch in the OFF position.

With ZOOM/FOCUS EXCHANGE Switch ② in the ON position, the operations shown on the panel do not agree with the indications on the panel. In this case, paste the supplied seal on the panel.

### ● Focus Reverse Switch

#### [FOCUS REVERSE, NOR/REV]

Changes the operating direction of FOCUS Lever ⑥. The lens is focused far when FOCUS Lever ⑥ is moved toward FAR, or near when the lever is moved toward NEAR, provided that FOCUS REVERSE Switch ④ is in the NOR position. When FOCUS REVERSE Switch ④ is set to the REV position, the lens focus operates in the opposite direction.

With FOCUS REVERSE Switch ④ in the REV position, the operating directions shown on the panel are opposite to the indications on the panel. In this case, paste the supplied seal on the panel.

### ● Tilt Reverse Switch [TILT REVERSE, NOR/REV]

Changes the tilt direction controlled by PAN/TILT Lever ⑧. The pan/tilt head turns up when PAN/TILT Lever ⑧ is moved toward UP, or down when it is moved toward DOWN, provided that TILT REVERSE Switch ④ is in the NOR position. The pan/tilt head moves in the opposite direction if the TILT REVERSE Switch ④ is in the REV position.

With TILT REVERSE Switch ④ in the REV position, the operating directions shown on the panel are opposite to the indications on the panel. In this case, paste the supplied seal on the panel.

### ● Pan Reverse Switch [PAN REVERSE, NOR/REV]

Changes the pan direction controlled by PAN/TILT Lever ⑧. The pan/tilt head turns leftward when PAN/TILT Lever ⑧ is moved toward LEFT, or rightward if it moved toward RIGHT.

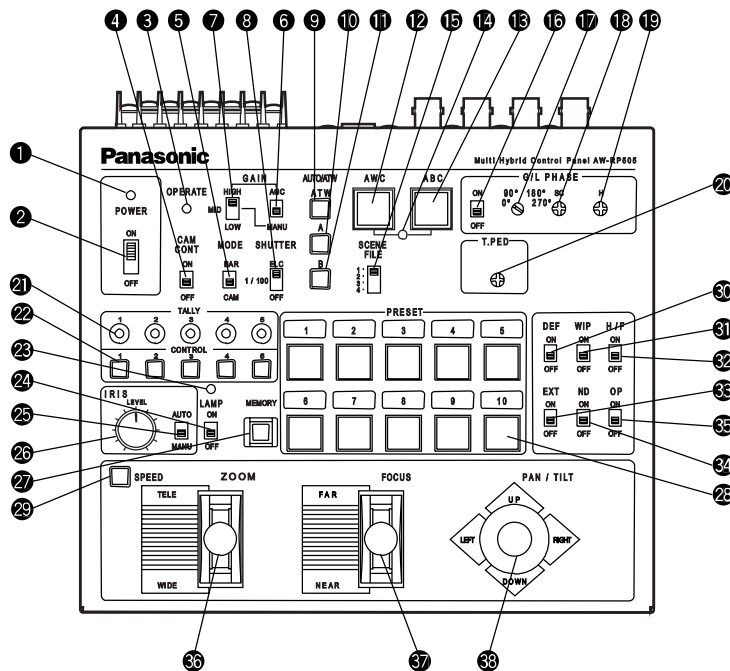
The rotary head turns in the opposite direction if the PAN REVERSE Switch ❸ is in the REV position, provided that PAN REVERSE Switch ❸ is in the NOR position. When PAN REVERSE Switch ❸ is set to the REV position, the pan/tilt head turns in the opposite directions.

With PAN REVERSE Switch ❸ in the REV position, the operating directions shown on the panel are opposite to the indications on the panel. In this case, paste the supplied seal on the panel.

**Note:** TILT REVERSE Switch ❹ and PAN REVERSE Switch ❸ may be used to reverse the operating direction of the pan/tilt head, but be sure to set the operating direction of the pan/tilt head with its mounting direction selection switch during its installation depending on whether the pan/tilt head is mounted on the floor or is suspended. Unless the mounting direction selection switch on the pan/tilt head is properly set, the pan/tilt head will pan or tilt in the opposite direction and the pan/tilt head operation limiters will not be properly stored in the memory. For details on the setting of this switch, refer to INSTALLATION OF PAN/TILT HEAD at page 18 or the Operating Instructions for the Pan/tilt Head.

## [AW-RP505]

### ■ Control Panel



**Note:** To control the cameras and pan/tilt head, the power switch on the Multiport Hub must be in the ON position. Only the camera and pan/tilt head selected with CONTROL Switch ❷ can be set and controlled. First, select a camera with CONTROL Switch ❷ set CAM CONT Switch ❶ to the ON position, and make the necessary settings. After setting the camera, set CAM CONT Switch ❶ back to the OFF position.

#### ❶ Power Indicator [POWER]

Lights red when POWER ON/OFF Switch ❷ is in the ON position, and goes out when the same switch is set to the OFF position.

#### ❷ Power CONTROL Switch [POWER, ON/OFF]

All the connected cameras and pan/tilt heads are switched on when this switch is set to the ON position. (The power indicator lights.) The camera and pan/tilt head are partially switched off when this switch is set to the OFF position.

**Note:** When the switch is set to the OFF position, the camera is totally switched off but the communication line between the pan/tilt head and this control panel remains live. To disconnect all power supply, pull out the power plug from the electrical outlet.

#### ❸ Operating Indicator [OPERATE]

Lights green when communication begins normally between the camera and the control panel, and goes out if a communication error occurs.

● **Camera Control Switch [CAM CONT, ON/OFF]**

Before making camera settings, select a camera with CONTROL Switch ② then set CAM CONT Switch ① to the ON position. After making the necessary settings, set CAM CONT Switch ① back to the OFF position.

**Note:** At the same time as CAM CONT Switch ① is set to the ON position, all the switch settings of this control panel are sent to the selected camera to update its settings. Do not shift CAM CONT Switch ① to the ON position except when changing the camera settings. If a different camera is selected with CONTROL Switch ② when CAM CONT Switch ① is in the ON position, the settings of the newly selected camera will also be changed. Before selecting another camera with CONTROL Switch ②, be sure to set CAM CONT Switch ① back to the OFF position.

● **Mode Selection Switch [MODE, BAR/CAM]**

Used to select camera colour bar signals or camera video signals. Select a camera with CONTROL Switch ②, set CAM CONT Switch ① to the ON position, then select the desired type of signal with this switch. With the switch set to BAR, the control panel outputs colour bar signals from the video output terminal. When the switch is set to CAM, it outputs camera video signals. After selecting it, set CAM CONT Switch ① back to the OFF position.

● **AGC Selection Switch [GAIN, AGC/MANU]**

Keep this switch in the AGC position if you want to keep automatic gain control. Select a camera with CONTROL Switch ②, set CAM CONT Switch ① to the ON position, then select AGC or MANU as necessary. When this switch is at AGC GAIN H/M/L switch ③ is invalid. After selecting it, set CAM CONT Switch ① back to the OFF position.

● **Gain Selection Switch [GAIN, HIGH/MID/LOW]**

This switch is valid only when GAIN AGC/MANU Switch ③ is in the MANU position. Select a camera with CONTROL Switch ②, set CAM CONT Switch ① to the ON position, then select HIGH, MID, or LOW. Normally, keep it in the LOW position. When the camera is used in a dark place or when video output level is not high enough even if the iris is wide open, set the switch to the MID or HIGH position. After selecting it, set CAM CONT Switch ① back to the OFF position.

● **Electronic Shutter Speed Selection Switch [SHUTTER, ELC/ 1/100 /OFF]**

Used to select a mode of camera electronic shutter control. Select a camera with CONTROL Switch ②, set CAM CONT Switch ① to the ON position, then select ELC, 1/100, or OFF. With the switch in the ELC position, the electronic shutter is controlled and the camera sensitivity is automatically adjusted when using the camera in a bright place. The shutter speed is 1/100 second when the switch is in the 1/100 position. The electronic shutter is off when the switch is in the OFF position. After selecting it, set CAM CONT Switch ① back to the OFF position.

● **White Balance ATW Selection Switch [AUTO/ATW, ATW]**

When this switch is depressed, the camera selected with CONTROL Switch ② keeps automatically adjusting white balance. The switch lights when it is selected.

● **White Balance Ach Selection Switch [AUTO/ATW, A]**

When this switch is pressed, white balance will be as stored in Channel A of the camera selected with CONTROL Switch ②. The switch lights when it is selected. When AWC switch ④ is pressed after selecting AUTO/ATW, A, white balance is automatically adjusted and stored in Channel A.

● **White Balance Bch Selection Switch [AUTO/ATW, B]**

When this switch is depressed, white balance will be as stored in Channel B of the camera selected with CONTROL Switch ②. The switch lights when it is selected. When AWC switch ④ is pressed after selecting AUTO/ATW, B, white balance is automatically adjusted and stored in Channel B.

● **Auto White Start Switch [AWC]**

If this switch is pressed when AUTO/ATW A Switch ④ or AUTO/ATW B Switch ④ is selected, white balance is automatically adjusted on the camera selected with CONTROL Switch ②. The adjustment results are stored in Channel A or B. This switch is invalid if the MODE BAR/CAM switch ③ is in the BAR position. Auto Set Indicator ⑤ flashes while AWC is in operation, and goes out when white balance has been properly adjusted. Auto Set Indicator ⑤ remains lit if white balance adjustment fails.

**Note:** White balance may not be adjustable if there is no white in the image being taken by the camera. For details, refer to the Operating Instructions for the Camera.

⑬ **Auto Black Start Switch [ABC]**

When this switch is depressed, the lens iris is automatically closed to set black balance on the camera selected with CONTROL Switch ②. Be sure to keep the IRIS AUTO/MANU switch ③ in the AUTO position in setting black balance. Auto Set Indicator ⑭ flashes while ABC is in operation, and goes out when black balance has been properly adjusted. Auto Set Indicator ⑭ remains lit if black balance adjustment fails. Black balance adjustment may fail if the total pedestal is too low. In such a case, adjust the total pedestal with T.PED Control ⑥ (referring to the Operating Procedures at page 26 and try to adjust black balance again.

⑭ **Auto Set Indicator**

This LED flashes during white balance or black balance adjustment with AWC Switch ① or ABC Switch ⑬ depressed, and goes out when the adjustment has ended normally. The LED remains lit if balance adjustment fails.

⑮ **Scene File Selection Switch [SCENE FILE, 1/2/3/4]**

Select a scene file preset on the camera side. Remember, however, that [4] is camera scene file USER A or USER B (provided that or AW-E560 is connected).

⑯ **Genlock Phase Control Switch**

[G/L PHASE, ON/OFF]

Used to adjust the genlock phase in operating the camera in external sync mode. Select a camera with CONTROL Switch ②, set CAM CONT Switch ① to the ON position, then set G/L PHASE Switch ⑯ to the ON position. After G/L phase setting, set CAM CONT Switch ① and G/L PHASE Switch ⑯ back to the OFF position.

**Note:** If G/L PHASE Switch ⑯ is set to the ON position when CAM CONT Switch ① is at ON, the genlock phase setting data of this control panel is sent to the camera to update its genlock phase settings. Do not shift G/L PHASE Switch ⑯ to the ON position except when changing the camera genlock phase settings. If a different camera is selected with CONTROL Switch ② when both CAM CONT Switch ① and G/L PHASE Switch ⑯ are in the ON position, the genlock phase settings of the newly selected camera will be similarly changed.

Before changing the camera for another, set G/L PHASE Switch ⑯ back to the OFF position.

⑰ **Genlock Subcarrier Phase Coarse Switch**

[G/L PHASE, 0°/90°/180°/270°]

Used for coarse adjustment of the colour phases of genlock input and video output signals in operating the camera in external sync mode. Used in combination with G/L PHASE SC Control ⑱, the switch has an adjustment range of over 360°. Before making an adjustment, set CAM CONT Switch ① and G/L PHASE Switch ⑯ to the ON position. After the adjustment, set both CAM CONT Switch ① and G/L PHASE Switch ⑯ back to the OFF position.

⑱ **Genlock Subcarrier Phase Fine Control**

[G/L PHASE, SC]

Used for fine adjustment of the colour phases of genlock input and video output signals in operating the camera in external sync mode. Use this switch in combination with G/L PHASE Coarse Switch ⑰. Before making an adjustment, set CAM CONT Switch ① and G/L PHASE Switch ⑯ to the ON position. After the adjustment, set both CAM CONT Switch ① and G/L PHASE Switch ⑯ back to the OFF position.

⑲ **G/L Horizontal Phase Adjustment Control**

[G/L PHASE, H]

Used to adjust the horizontal phases of genlock input and video output signals in operating the camera in external sync mode. Before making a horizontal phase adjustment, set CAM CONT Switch ① and G/L PHASE Switch ⑯ to the ON position.

⑳ **Total Pedestal Level Control [T.PED]**

The set pedestal level of the camera's Y (luminance) signal can be adjusted. This control is used in a system of two or more cameras to adjust the pedestal levels of these cameras. Select a camera with CONTROL Switch ②, set CAM CONT Switch ① to the ON position, then adjust the total pedestal level with T.PED Control ⑳. The control may operate not continuous sometimes due to digital signal processing. After the adjustment, set CAM CONT Switch ① back to the OFF position.

㉑ **Tally Indicator [TALLY]**

When a tally signal is input from a special effect generator (SEG) or video switcher, for example, to any of the jacks [1] to [5] of TALLY Terminal ㉒, the corresponding LED lights red.

#### ● Camera/Pan/tilt Head Selection Switch [CONTROL]

Select a desired camera with pan/tilt head from among those connected to the control panel. When a camera with pan/tilt head is selected by pressing one of the buttons [1] to [5], the pressed button lights.

**Note:** Even if an unconnected camera with pan/tilt head is selected by pressing the corresponding button, the button lights.

#### ● Lamp Indicator [LAMP]

Lights red when LAMP ON/OFF Switch ● is in the ON position. Flashes if the lamp connected to the AC adapter (AW-PS300) for the pan/tilt head selected with CONTROL Switch ● is broken. Goes out when LAMP ON/OFF Switch ● is set to the OFF position.

**Caution:** In connecting a halogen lamp to the Pan/tilt Head AC Adapter (AW-PS300), make sure that it is in the wattage range of 250 to 500W. If a halogen lamp less than 250W is used, the LED may flash when LAMP ON/OFF Switch ● is in the on position even if the lamp is normal.

#### ● Lamp Switch [LAMP, ON/OFF]

Switches on and off the halogen lamp connected to the lamp AC receptacle of the Pan/tilt Head AC Adapter (AW-PS300). Select a pan/tilt head with CONTROL Switch ●, then switch the halogen lamp on or off as necessary. Set it to the ON position to switch the halogen lamp on (in which case, the lamp Indicator flashes). Set it to the OFF position to switch the halogen lamp off.

**Note:** When a pan/tilt head is selected with CONTROL Switch ●, the halogen lamp connected to the AC adapter for the pan/tilt head selected with that switch lights or goes out depending on the position of LAMP ON/OFF Switch ●.

#### ● Lens Iris Selection Switch [IRIS, AUTO/MANU]

Used to select AUTO or MANU mode in adjusting the lens iris connected to the selected camera and pan/tilt head. When this switch is in the AUTO position, the lens iris is automatically controlled according to the quantity of light entering the lens. When the switch is in the MANU position, the iris can be manually controlled over the range from the closed position to the fully open position using IRIS LEVEL Control ●.

Set the switch to the MANU position in storing iris data in PRESET Switch ● with MEMORY Switch ●. If the switch is in the AUTO position, iris data will not be stored in the memory.

#### ● Lens Iris Control [IRIS, LEVEL]

When IRIS AUTO/MANU Switch ● is in the MANU position, the iris can be controlled over the range from the closed position to the fully open position using this control. Turning it clockwise opens the iris and turning it counterclockwise closes the iris.

If the camera is preset to AUTO IRIS ADJ ON when IRIS AUTO/MANU Switch ● is in the AUTO position, this control may be used for fine adjustment of ALC focus level. For details, refer to the Operating Instructions for the Camera.

If the preset memory is called by pressing PRESET Switch ● when IRIS AUTO/MANU Switch ● is in the MANU position, the iris is adjusted to the preset value stored in the memory regardless of the position of this control. If the control is turned after that, the iris is adjusted corresponding to the position of the control.

#### ● Preset Memory Switch [MEMORY]

Head pan/tilt positions, lens zoom/focus/iris (provided that IRIS AUTO/MANU Switch ● is in the MANU position), and camera white balance (ATW, Channel A or B) can be preset in up to 10 memory buttons per pan/tilt head.

To preset them in these buttons, first select a camera and pan/tilt head with CONTROL Switch ●, then select a head pan/tilt position, lens zoom/focus/iris, or camera white balance (ATW Channel A or B); press MEMORY Switch ● (so it lights yellow green and all the 10 buttons of PRESET Switch ● flash); while keeping the MEMORY Switch ● depressed, press one of the 10 buttons of PRESET Switch ● as desired. The pressed button in which the selected item is stored lights.

#### ● Preset Position Selection Switch [PRESET]

The head pan/tilt positions, lens zoom/focus/iris, and camera white balance that are stored in the buttons of PRESET Switch ● can be recalled to operate the pan/tilt head, the lens, and the camera according to the preset data.

To preset them in the PRESET switches, first select a camera and pan/tilt head with CONTROL Switch ●, then select a head pan/tilt position, lens zoom/ focus/iris, or camera white balance (ATW Channel A or B); press the MEMORY Switch ● (so it lights yellow green and all the 10 buttons of PRESET Switch ● flash); at the same time press one of the 10 buttons of PRESET Switch ● as desired. The pressed button in which the selected item is stored lights.

❶ **Speed Selection Switch [SPEED]**

If ZOOM lever ❶, FOCUS Lever ❷, or PAN/TILT Lever ❸ is moved while keeping SPEED Switch ❹ depressed, the corresponding operation takes place at low speed, provided that SPEED SW CHANGE Switch ❺ is in the LOW position. If one of these levers is moved with SPEED Switch ❹ depressed when SPEED SW CHANGE Switch ❺ is in the HIGH position, the corresponding operation takes place at high speed. SPEED Switch ❹ remains lit while it is kept depressed.

❷ **Defroster Switch [DEF, ON/OFF]**

If this switch is connected to a pan/tilt head with a built-in defroster function, it switches on and off the defroster.

**Note:** At the same time as a pan/tilt head is selected with CONTROL Switch ❶, the defroster of the selected pan/tilt head is switched on or off depending on the position of DEF ON/OFF Switch ❷.

❸ **Wiper Switch [WIP, ON/OFF]**

If this switch is connected to a pan/tilt head with a built-in wiper function, it switches on and off the wiper.

**Note:** At the same time as a pan/tilt head is selected with CONTROL Switch ❶, the wiper of the selected pan/tilt head is switched on or off depending on the position of WIP ON/OFF Switch ❸.

❹ **Heater/Fan Switch [H/F, ON/OFF]**

If this switch is connected to a pan/tilt head with a built-in heater or fan function, it switches on and off the heater or fan.

**Note:** At the same time as a pan/tilt head is selected with CONTROL Switch ❶, the heater or fan of the selected pan/tilt head is switched on or off depending on the position of H/F ON/OFF Switch ❹.

❺ **Lens Extender Switch [EXT, ON/OFF]**

If this switch is connected to a lens with a built-in extender function, it switches on and off the lens extender. For details, refer to the Operating Instructions for the Lenses and Pan/tilt Head.

**Note:** At the same time as a pan/tilt head is selected with CONTROL Switch ❶, the lens extender of the selected pan/tilt head is switched on or off depending on the position of EXT ON/OFF Switch ❺.

❻ **ND Filter Switch [ND, ON/OFF]**

If this switch is connected to a lens with a built-in ND filter function, it switches on and off the ND filter. For details, refer to the Operating Instructions for the Lenses and Pan/tilt Head.

**Note:** At the same time as a pan/tilt head is selected with CONTROL Switch ❶, the ND filter of the selected pan/tilt head is switched on or off depending on the position of ND ON/OFF Switch ❻.

❼ **Option Switch [OP, ON/OFF]**

Controls the option switch terminal on the Pan/tilt Head AC Adapter (AW-PS300) to short circuit or open it. That is, the option switch terminal is shorted when OP ON/OFF Switch ❼ is in the ON position, or is opened when it is in the OFF position. For details, refer to the Operating Instructions for the Pan/tilt Head AC Adapter.

**Note:** At the same time as a pan/tilt head is selected with CONTROL Switch ❶, the option switch terminal on the selected pan/tilt head is shorted or opened depending on the position of OP ON/OFF Switch ❼.

❽ **Zoom Lever [ZOOM, TELE/WIDE]**

Used to control the zoom operation of the lens that is connected to the pan/tilt head selected with CONTROL Switch ❶. Zoom speed varies according to the angle of the lever. The lens moves toward TELE when the lever is moved toward TELE, or toward WIDE when the lever is moved toward WIDE, provided that ZOOM REVERSE Switch ❾ is in the NOR position. When ZOOM REVERSE Switch ❾ is set to the REV position, the lens moves in the opposite direction. ZOOM/FOCUS EXCHANGE Switch ❶ may be used to exchange its function with FOCUS Lever ❷.

❾ **Focus Lever [FOCUS FAR/NEAR]**

Used to adjust the focus of the lens that is connected to the pan/tilt head selected with CONTROL Switch ❶. Used to adjust the lens focus at varying speed depending on the angle of the lever. The lens is focused far when the lever is moved toward FAR, or near when the lever is moved toward NEAR, provided that FOCUS REVERSE Switch ❿ is in the NOR position. When FOCUS REVERSE Switch ❿ is set to the REV position, the lens focus operates in the opposite direction. ZOOM/FOCUS EXCHANGE Switch ❶ may be used to exchange its function with ZOOM Lever ❽.

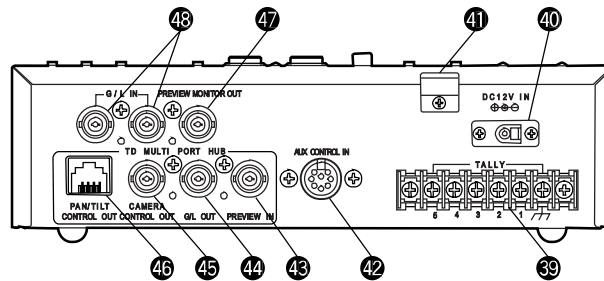
❿ **Pan/tilt Lever [PAN/TILT, UP/DOWN/LEFT/RIGHT]**

Used to control the pan/tilt operation of the pan/tilt head selected with CONTROL Switch ❶. Controls the head's pan/tilt operation at varying speed depending on the angle of the lever. The pan/tilt head turns up when the lever is moved toward UP, or down when it is moved toward DOWN, provided that TILT REVERSE Switch ❶ is in the NOR position.

The pan/tilt head moves in the opposite direction if the TILT REVERSE Switch ❸ is in the REV position. The pan/tilt head turns leftward when the lever is moved toward LEFT, or rightward when it is moved toward RIGHT, provided that PAN REVERSE Switch ❹ is in the NOR position. The pan/tilt head moves in the opposite direction if the PAN REVERSE Switch ❹ is in the REV position.

**Note:** TILT REVERSE Switch ❸ and PAN REVERSE Switch ❹ may be used to reverse the operating direction of the pan/tilt head, but be sure to set the operating direction of the pan/tilt head with its mounting direction selection switch during its installation depending on whether the pan/tilt head is mounted on the floor or is suspended. Unless the mounting direction selection switch on the pan/tilt head is properly set, the pan/tilt head will pan or tilt in the opposite direction and the pan/tilt head operation limiters will not be properly stored in the memory. For details on the setting of this switch, refer to INSTALLATION OF PAN/TILT HEAD.

## ■ REAR PANEL



### ❶ TALLY Terminal [TALLY] (6-pin Terminal Board)

Connect it to the tally connector on a special effect generator (SEG) or a video switcher, for example. When the voltage of any of the jacks [1] to [5] of the terminal falls to the ground level, the corresponding TALLY Indicator ❶ and the Tally Indicator on the Pan/tilt Head (AW-PH300) light red.

### ❷ 12V DC Input Connector [DC 12V IN] (DC Jack)

Connect the AC Adapter AW-PS301 (optional).

### ❸ Cord Clamp

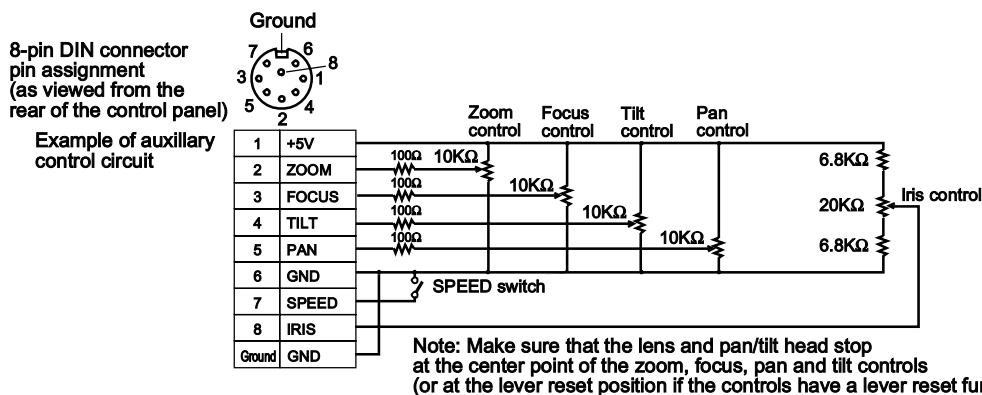
Clamps the DC cord of the AC Adapter AW-PS301 (optional) connected to DC 12V IN Connector ❷ to prevent its disconnection.

### ❹ Auxiliary Control Input Connector

#### [AUX CONTROL IN] (8-pin DIN Connector)

External control signals are input to this connector in controlling the head's pan/tilt, lens zoom, focus and iris operations.

**Note:** In externally controlling the pan/tilt head and lens through this connector, set IRIS LEVEL Control ❶ on this control panel to the centre point (straight up), and do not simultaneously operate SPEED Switch ❷, ZOOM Lever ❸, FOCUS Lever ❹, and PAN/TILT Lever ❺. Operation errors may occur if external controls are simultaneously used.



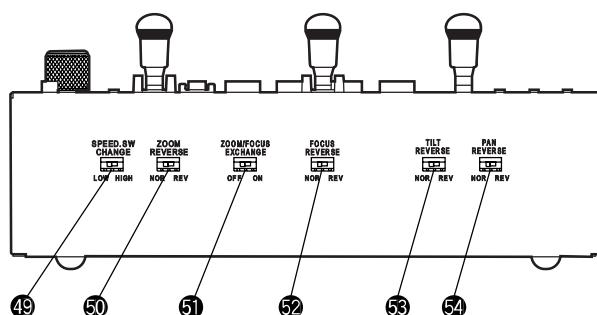
- ④ **Preview Video Input Connector [TO MULTIPOINT HUB, PREVIEW IN] (BNC Connector)**  
Connect it to the preview video output connector [PREVIEW OUT] on the Multipoint Hub with a coaxial cable (5C-2V or equivalent). The maximum allowable length of the cable is 10 meters.
- ⑤ **Genlock Output Connector [TO MULTIPOINT HUB, G/L OUT] (BNC Connector)**  
Connect it to the G/L input connector [G/L IN] on the Multipoint Hub with a coaxial cable (5C-2V or equivalent) in operating the camera in external sync mode. The cable can be extended up to 10 meters.
- ⑥ **Camera Control Output Connector [TO MULTIPOINT HUB, CAMERA CONTROL OUT] (BNC Connector)**  
Connect it to camera control input connector [CAMERA CONTROL IN] on the Multipoint Hub with a coaxial cable (5C-2V or equivalent), which may be extended up to 10 meters.
- ⑦ **Pan/tilt Control Output Connector [TO MULTIPOINT HUB, PAN/TILT CONTROL OUT] (RJ-45 8-pin Modular Jack)**  
Connect it to pan/tilt control input connector [P/T CONTROL IN] on the Multipoint Hub with a 10BASE-T straight cable (UTP category 5 or equivalent), which may be extended up to 10 meters.

- ⑧ **Preview Video Output Connector [PREVIEW MONITOR OUT] (BNC Connector)**  
The video signals of the camera selected with CONTROL Switch ② are output from this connector so that the selected camera can be visually confirmed. Connect this connector to the monitor video input with a coaxial cable.

**Note:** The preview video signals are for confirmation of which camera has been selected, so the picture quality proper to the camera cannot be guaranteed. To output camera video signals, use video output connector [VIDEO OUT] or S-video output connector [S-VIDEO OUT] on the Multipoint Hub.

- ⑨ **Genlock Input Connectors [G/L IN] (BNC Connector)**  
Black burst signals or are input to one of the two connectors in operating the camera in external sync mode. The two connectors are automatically terminated, so input the above signals to one of them and use the other as a loop-through output.

## ■ Front Panel



- ⑩ **Focus Reverse Switch [FOCUS REVERSE, NOR/REV]**  
Changes the operating direction of FOCUS Lever ③. The lens is focused far when FOCUS Lever ③ is moved toward FAR, or near when the lever is moved toward NEAR, provided that FOCUS REVERSE Switch ⑩ is in the NOR position. When FOCUS REVERSE Switch ⑩ is set to the REV position, the lens focus operates in the opposite direction. With FOCUS REVERSE Switch ⑩ in the REV position, the operating directions shown on the panel are opposite to the indications on the panel. In this case, paste the supplied seal on the panel.
- ⑪ **Tilt Reverse Switch [TILT REVERSE, NOR/REV]**  
Changes the tilt direction controlled by PAN/TILT Lever ④. The pan/tilt head turns up when PAN/TILT Lever ④ is moved toward UP, or down when it is moved toward DOWN, provided that TILT REVERSE Switch ⑪ is in the NOR position. The pan/tilt head moves in the opposite direction if the TILT REVERSE Switch ⑪ is in the REV position. With TILT REVERSE Switch ⑪ in the REV position, the operating directions shown on the panel are opposite to the indications on the panel. In this case, paste the supplied seal on the panel.

#### ④ Pan Reverse Switch [PAN REVERSE, NOR/REV]

Changes the pan direction controlled by PAN/TILT Lever ②. The pan/tilt head turns leftward when PAN/TILT Lever ② is moved toward LEFT, or rightward if it moved toward RIGHT. The rotary head turns in the opposite direction if the PAN REVERSE Switch ④ is in the REV position, provided that PAN REVERSE Switch ④ is in the NOR position. When PAN REVERSE Switch ④ is set to the REV position, the pan/tilt head turns in the opposite directions.

With PAN REVERSE Switch ④ in the REV position, the operating directions shown on the panel are opposite to the indications on the panel. In this case, paste the supplied seal on the panel.

**Note:** TILT REVERSE Switch ⑤ and PAN REVERSE Switch ④ may be used to reverse the operating direction of the pan/tilt head, but be sure to set the operating direction of the pan/tilt head with its mounting direction selection switch during its installation depending on whether the pan/tilt head is mounted on the floor or is suspended.

Unless the mounting direction selection switch on the pan/tilt head is properly set, the pan/tilt head will pan or tilt in the opposite direction and the pan/tilt head operation limiters will not be properly stored in the memory. For details on the setting of this switch, refer to INSTALLATION OF PAN/TILT HEAD.

#### ⑤ Speed Switch Changing Switch [SPEED SW CHANGE, LOW/HIGH]

Changes the polarity of SPEED Switch ③. If ZOOM lever ①, FOCUS Lever ⑥, or PAN/TILT Lever ② is moved while keeping SPEED Switch ③ depressed, the corresponding operation takes place at low speed, provided that SPEED SW CHANGE Switch ⑤ is in the LOW position. If one of these levers is moved with SPEED Switch ③ depressed when SPEED SW CHANGE Switch ⑤ is in the HIGH position, the corresponding operation takes place at high speed.

The speed polarity can also be changed by pressing MEMORY Switch ⑦ while keeping SPEED Switch ③ depressed. When this step is taken again, the original speed polarity is restored. Take this step if it is difficult to shift SPEED SW CHANGE Switch ⑤ because this control panel is mounted on a console or the like.

#### ⑥ Zoom Reverse Switch

##### [ZOOM REVERSE, NORM/REV]

Changes the operating direction of ZOOM Lever ①. The lens zoom moves toward TELE when ZOOM Lever ① is moved toward TELE, or toward WIDE when it is moved toward WIDE, provided that ZOOM REVERSE Switch ⑥ is in the NOR position. When ZOOM REVERSE Switch ⑥ is set to the REV position, lens zoom operation takes place in the opposite direction. With ZOOM REVERSE Switch ⑥ in the REV position, the operating directions shown on the panel are reversed. In this case, paste the supplied seal on the panel.

#### ⑦ Zoom/Focus Exchange Switch

##### [ZOOM/FOCUS EXCHANGE, ON/OFF]

ZOOM Lever ① and FOCUS Lever ⑥ exchange their function between them when this switch is set to the ON position. Unless this exchange is needed, keep the switch in the OFF position.

With ZOOM/FOCUS EXCHANGE Switch ⑦ in the ON position, the operations shown on the panel do not agree with the indications on the panel. In this case, paste the supplied seal on the panel.

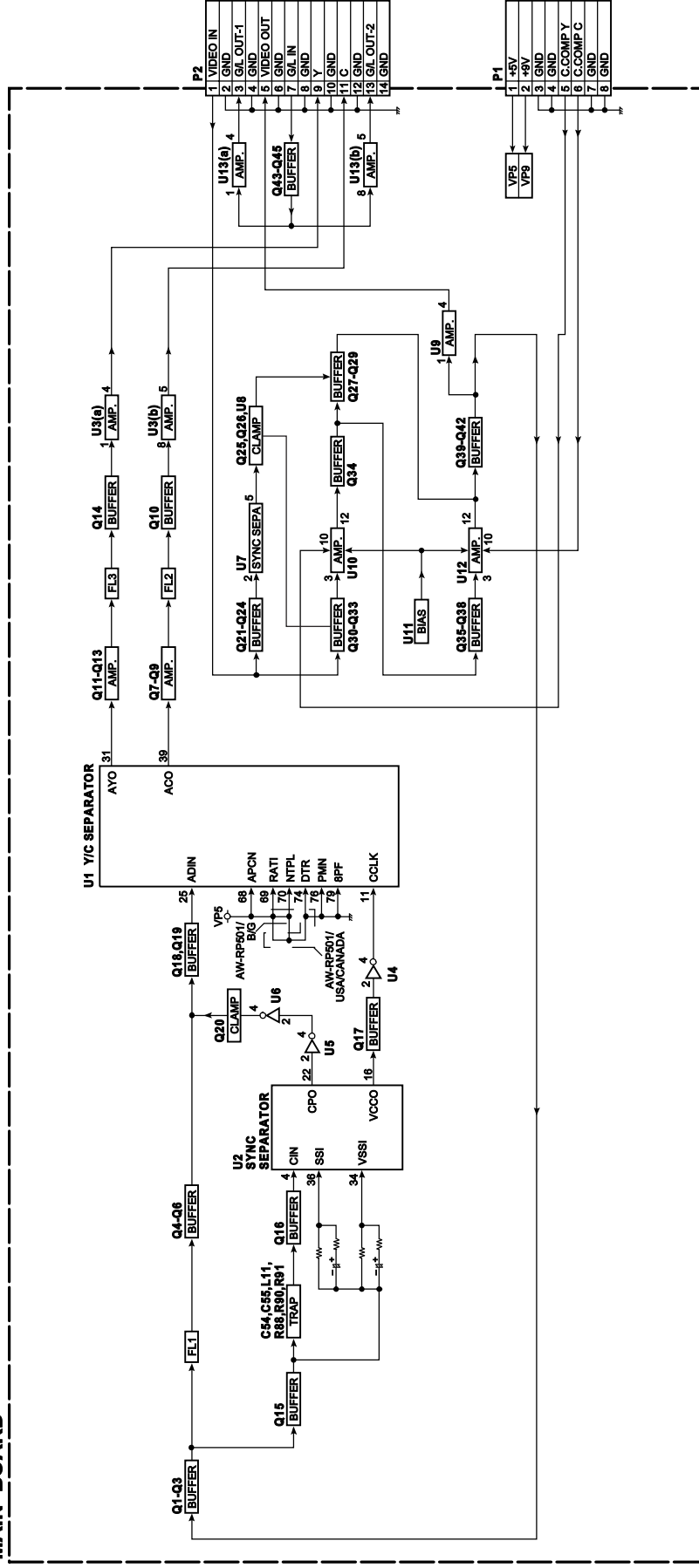
**MAIN BOARD**

**SW/CAM BOARD**

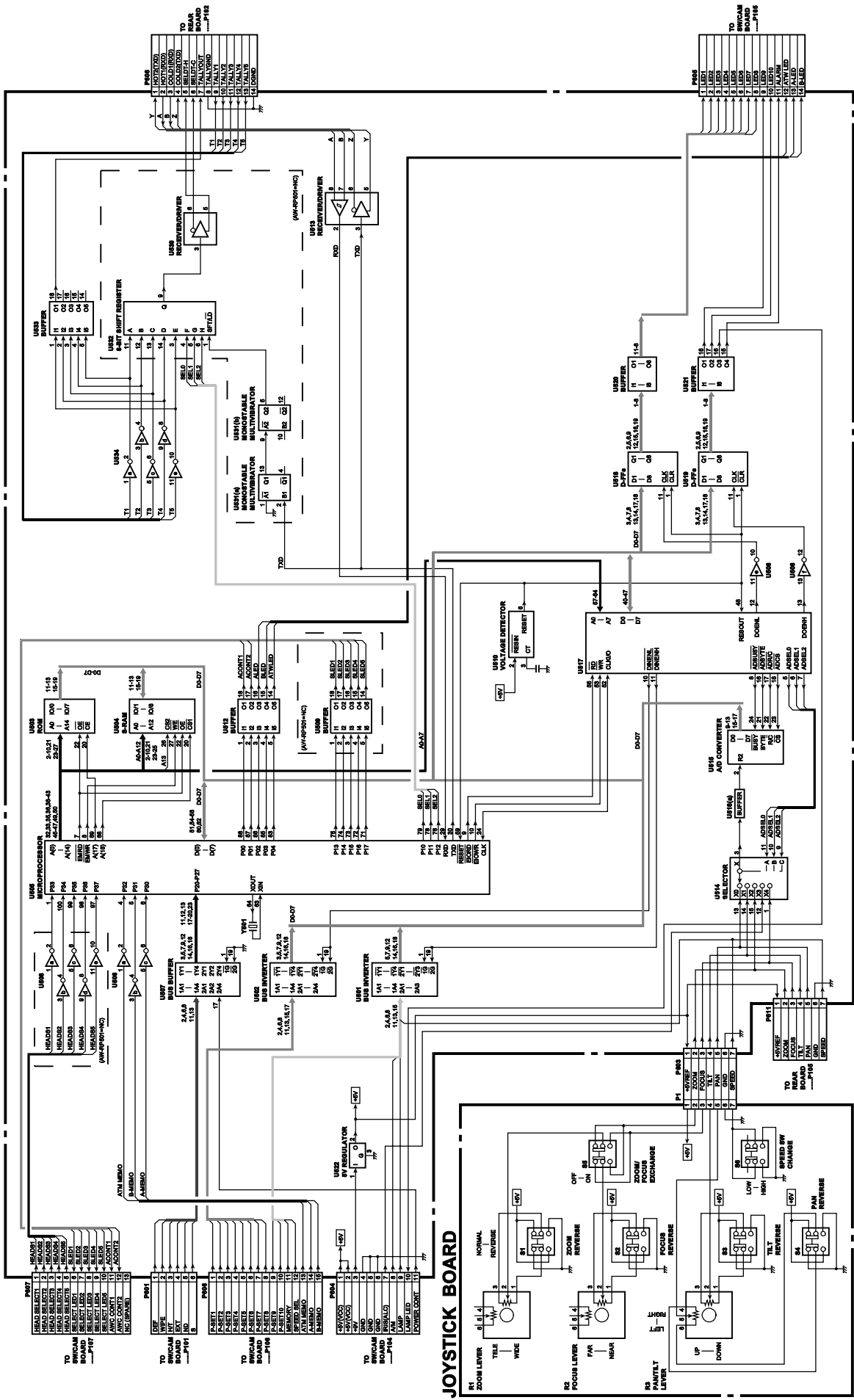
**JOYSTICK BOARD**

**REAR BOARD**

# MAIN BOARD BLOCK DIAGRAM OF MAIN BOARD (1/2 (Cable Y/C SECTION))



# MAIN BOARD (2/2 (PT MICOM SECTION)) & JOYSTICK BOARD BLOCK DIAGRAM OF MAIN BOARD (2/2 (PT MICOM SECTION)) & JOYSTICK BOARD



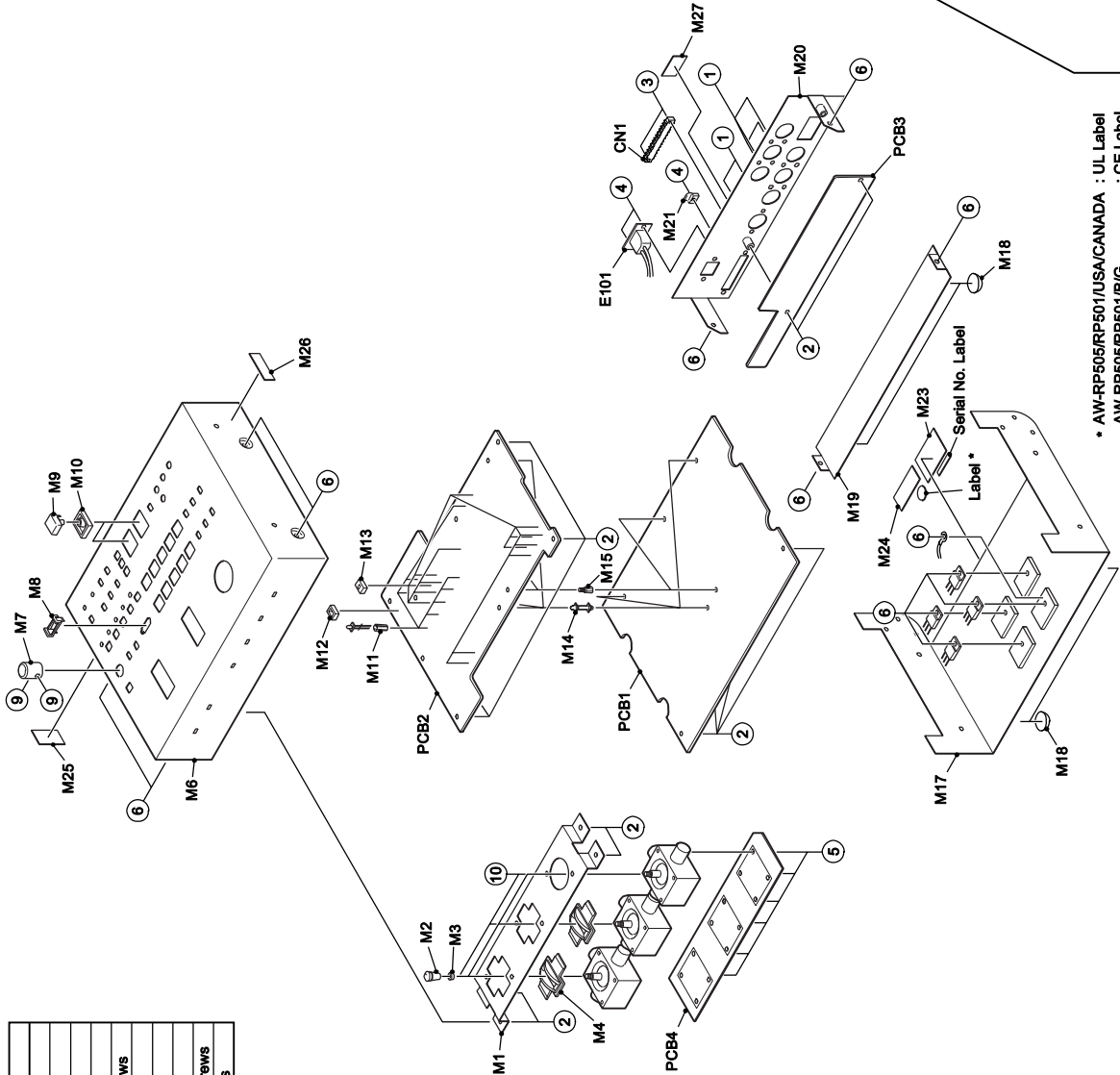
## SW/CAM BOARD



# EXPLODED VIEW

○ Numbers show screws, washers, nuts and etc.

| No. | Screws     | Description                   |
|-----|------------|-------------------------------|
| 1   | XTN3+6BFN  | Pan Head Tapping Screws       |
| 2   | XSB3+6FX   | Binding Head Screws           |
| 3   | XSB3+12FN  | Binding Head Screws           |
| 4   | XSB2+4FXK  | Binding Head Black Screws     |
| 5   | XTB3+6BFX  | Binding Head Tapping Screws   |
| 6   | XSB3+6FN   | Binding Head Screws           |
| 7   | XSB4+8FN   | Binding Head Screws           |
| 8   | XSB6+8FN   | Binding Head Screws           |
| 9   | XXE26D4FXK | Hex Slotted Head Black Screws |
| 10  | XTS3+8BFX  | Flush Head Tapping Screws     |



\* AW-RP505/RP501/USA/CANADA : UL Label  
AW-RP505/RP501/B/G : CE Label

# REPLACEMENT PARTS LIST

## Important Notice

- Components identified by "△" mark have special characteristics important for safety.  
When replacing any of these components, use only manufacturer's specified parts.
- RTL : Retention Time Limited (No longer available after discontinuing product).

| REF. NO.             | PART NO.     | DESCRIPTION                        | REF. NO.          | PART NO.     | DESCRIPTION                                        |
|----------------------|--------------|------------------------------------|-------------------|--------------|----------------------------------------------------|
| <b>AW-RP501</b>      |              |                                    | <b>MAIN BOARD</b> |              |                                                    |
| <b>MISCELLANEOUS</b> |              |                                    | PCB1 (RTL)        | YWWRP51JKZ2A | Printed Circuit Board Assy for AW-RP501/USA/Canada |
|                      |              |                                    |                   | YWWRP51EKZ2A | Printed Circuit Board Assy for AW-RP501/B/G        |
| U101                 | YWNJM7809FA  | IC                                 | U1                | YWCXD2044Q   | IC                                                 |
| U102                 | YWNJM7805FA  | IC                                 | U2                | YWUPC1862GS  | IC                                                 |
| U103                 | YWNJM7809FA  | IC                                 | U3                | NJM2268M     | IC                                                 |
| U104                 | YWNJM7805FA  | IC                                 | U4-6              | YWTC7S04FL   | IC                                                 |
| U105                 | HN27C256AFP  | Memory Device (ROM)                | U7                | YWLM1881M    | IC                                                 |
| J101                 | HEC075701003 | DC Jack                            | U8                | YWTC7S08FL   | IC                                                 |
| CN101                | YWM0092      | 8-pin DIN Connector                | U9                | YWNJM2267M   | IC                                                 |
| CN102                | AXS62822     | IC Socket Guide                    | U10               | NJM1496M     | IC                                                 |
| E101                 | ML40S1CXS2P  | 2-pin Terminal                     | U11               | TL092CPS     | IC                                                 |
| E102                 | YWCP501CP01B | Wire                               | U12               | NJM1496M     | IC                                                 |
| E103                 | YWCP501CP02B | Wire                               | U13               | YWNJM2267M   | IC                                                 |
| E104                 | YWCP501CP03B | Wire                               | U501,502          | MC74HC240AF  | IC                                                 |
| E105                 | YWP501CP03B  | Wire                               | U504              | YWHM6264BLFP | IC                                                 |
| E106                 | YWCP501CP04B | Wire                               | U505              | KL5C8012CFP  | IC                                                 |
| M1                   | YW1B1A465A   | Joystick Angle                     | U506              | SN74LS04NS   | IC                                                 |
| M2                   | YWV5RA0278A4 | Joystick Knob                      | U507              | MC74HC244AF  | IC                                                 |
| M3                   | YW2Y1A021A   | Joystick Collar                    | U510              | YWTL7705CPS  | IC                                                 |
| M4                   | YW5N1A022A   | Joystick Cover                     | U512              | YWTD62083F   | IC                                                 |
| M6                   | YW1A1A058B   | Cover                              | U513              | YWSN75179BPS | IC                                                 |
| M7                   | YW2R1A015A   | Iris Knob                          | U514              | MC74HC4051F  | IC                                                 |
| M8                   | YWTD446MR07A | Button Guide                       | U515              | YWADS7806U   | IC                                                 |
| M9                   | YWA6JG0016A3 | Button (WHT)                       | U516              | NJM2904M     | IC                                                 |
| M10                  | YWA6JC0017A4 | Button Guide (N4)                  | U517              | PTFPGA1      | IC                                                 |
| M12                  | YW5E1A017A   | Switch Cushion (A)                 | U518,519          | SN74ALS273NS | IC                                                 |
| M13                  | YW5E1A018A   | Switch Cushion (B)                 | U520,521          | YWTD62083F   | IC                                                 |
| M14                  | YWWLS160     | Locking Spacer                     | U522              | YW78L05UATE2 | IC                                                 |
| M15                  | YW2Y1A022A   | Spacer                             | U533              | YWTD62083F   | IC                                                 |
| M17                  | YW1A1A054A   | Chassis                            | U534              | YWMC74HC04AF | IC                                                 |
| M18                  | SJ-5003      | Rubber Foot                        | Q1                | 2SD1819QRS   | Transistor                                         |
| M19                  | YW1A1A065A   | Blank Panel                        | Q2                | 2SC3931-CD   | Transistor                                         |
| M20                  | YW1A1A062B   | Rear Panel                         | Q3,4              | 2SD1819QRS   | Transistor                                         |
| M21                  | YWV2GA0065A4 | Cord Clamp                         | Q5                | 2SC3931-CD   | Transistor                                         |
| M23 △                | YW7C1A028A   | Main Label for AW-RP501/USA/Canada | Q6,7              | 2SD1819QRS   | Transistor                                         |
|                      | YW7C1A029A   | Main Label for AW-RP501/B/G        | Q8                | 2SC3931-CD   | Transistor                                         |
| M24 △                | YFV7MA0061A4 | FCC Label for AW-RP501/USA/Canada  | Q9                | 2SD1819QRS   | Transistor                                         |
|                      |              |                                    | Q10               | 2SB1218QRS   | Transistor                                         |
| M27 △                | YWV7MA0338A4 | See Manual Label                   | Q11               | 2SD1819QRS   | Transistor                                         |
| M25 △                | YWV7MA1009A4 | EXT DC Label                       |                   |              |                                                    |
| M26 △                | YFV7MB0099A4 | Screw Caution Label                |                   |              |                                                    |

| REF. NO. | PART NO.    | DESCRIPTION                        |                 | REF. NO. | PART NO.    | DESCRIPTION             |                 |
|----------|-------------|------------------------------------|-----------------|----------|-------------|-------------------------|-----------------|
| Q12      | 2SC3931-CD  | Transistor                         |                 | R25      | ERJ3GEY0R00 | Carbon                  | 0 ohm 1/16W     |
| Q13      | 2SD1819QRS  | Transistor                         |                 | R26      | ERJ3GEYJ103 | Carbon                  | 10K ohms 1/16W  |
| Q14,15   | 2SB1218QRS  | Transistor                         |                 |          |             | for AW-RP501/B/G        |                 |
| Q16-18   | 2SD1819QRS  | Transistor                         |                 | R27      | ERJ3GEY0R00 | Carbon                  | 0 ohm 1/16W     |
| Q19      | 2SB1218QRS  | Transistor                         |                 |          |             | for AW-RP501/USA/Canada |                 |
| Q20      | 2SC3931-CD  | Transistor                         |                 | R28      | ERJ3GEYJ103 | Carbon                  | 10K ohms 1/16W  |
| Q21,22   | 2SD1819QRS  | Transistor                         |                 | R31,33   | ERJ3GEY0R00 | Carbon                  | 0 ohm 1/16W     |
| Q23      | 2SC3931-CD  | Transistor                         |                 | R35      | ERJ3GEYJ103 | Carbon                  | 10K ohms 1/16W  |
| Q24      | 2SD1819QRS  | Transistor                         |                 | R36      | ERJ3RHD332  | Metal                   | 3.3K ohms 1/16W |
| Q25      | 2SB1218QRS  | Transistor                         |                 | R37      | ERJ3GEYJ102 | Carbon                  | 1K ohms 1/16W   |
| Q26      | 2SC3931-CD  | Transistor                         |                 | R38,39   | ERJ3RHD102  | Metal                   | 1K ohms 1/16W   |
| Q27      | 2SA1532-CD  | Transistor for AW-RP501/USA/Canada |                 | R42      | ERJ3RHD332  | Metal                   | 3.3K ohms 1/16W |
|          | 2SB1218QRS  | Transistor for AW-RP501/B/G        |                 | R43      | ERJ3GEYJ102 | Carbon                  | 1K ohms 1/16W   |
| Q28      | 2SD1819QRS  | Transistor                         |                 | R46      | ERJ3RHD102  | Metal                   | 1K ohms 1/16W   |
| Q29      | 2SC3931-CD  | Transistor                         |                 | R47      | ERJ3RHD132  | Metal                   | 1.3K ohms 1/16W |
| Q30      | 2SD1819QRS  | Transistor                         |                 | R48      | ERJ3GEYJ750 | Carbon                  | 75 ohms 1/16W   |
| Q31      | 2SC3931-CD  | Transistor                         |                 | R49      | ERJ3GEYJ103 | Carbon                  | 10K ohms 1/16W  |
| Q32      | 2SA1532-CD  | Transistor for AW-RP501/USA/Canada |                 | R50      | ERJ3RHD201  | Metal                   | 200 ohms 1/16W  |
|          | 2SB1218QRS  | Transistor for AW-RP501/B/G        |                 | R51      | ERJ3GEYJ103 | Carbon                  | 10K ohms 1/16W  |
| Q33-35   | 2SD1819QRS  | Transistor                         |                 | R52      | ERJ3GEYJ220 | Carbon                  | 22 ohms 1/16W   |
| Q36      | 2SC3931-CD  | Transistor                         |                 | R53      | ERJ3GEYJ392 | Carbon                  | 3.9K ohms 1/16W |
| Q37,38   | 2SD1819QRS  | Transistor                         |                 | R54      | ERJ3RHD242  | Metal                   | 2.4K ohms 1/16W |
| Q39      | 2SA1532-CD  | Transistor                         |                 | R55      | ERJ3RHD392  | Metal                   | 3.9K ohms 1/16W |
| Q40      | 2SD1819QRS  | Transistor for AW-RP501/USA/Canada |                 | R56      | ERJ3GEYJ392 | Carbon                  | 3.9K ohms 1/16W |
|          | 2SC3931-CD  | Transistor for AW-RP501/B/G        |                 | R58      | ERJ3GEYJ752 | Carbon                  | 7.5K ohms 1/16W |
| Q41      | 2SC3931-CD  | Transistor                         |                 | R59      | ERJ3GEYJ512 | Carbon                  | 5.1K ohms 1/16W |
| Q42,43   | 2SD1819QRS  | Transistor                         |                 | R60      | ERJ3GEYJ562 | Carbon                  | 5.6K ohms 1/16W |
| Q44      | 2SC3931-CD  | Transistor                         |                 | R61,62   | ERJ3RHD331  | Metal                   | 330 ohms 1/16W  |
| Q45      | 2SD1819QRS  | Transistor                         |                 | R63      | ERJ3GEYJ220 | Carbon                  | 22 ohms 1/16W   |
| D1,2     | MA142K      | Diode                              |                 | R64      | ERJ3GEYJ272 | Carbon                  | 2.7K ohms 1/16W |
| D501     | MA142K      | Diode                              |                 | R65      | ERJ3RHD201  | Metal                   | 200 ohms 1/16W  |
| R1       | ERJ3GEYJ103 | Carbon                             | 10K ohms 1/16W  | R66      | ERJ3GEYJ103 | Carbon                  | 10K ohms 1/16W  |
| R2       | ERJ3GEYJ220 | Carbon                             | 22 ohms 1/16W   | R67      | ERJ3GEYJ220 | Carbon                  | 22 ohms 1/16W   |
| R3       | ERJ3GEYJ392 | Carbon                             | 3.9K ohms 1/16W | R68      | ERJ3GEYJ392 | Carbon                  | 3.9K ohms 1/16W |
| R4       | ERJ3RHD202  | Metal                              | 2K ohms 1/16W   | R69      | ERJ3RHD332  | Metal                   | 3.3K ohms 1/16W |
| R5       | ERJ3RHD392  | Metal                              | 3.9K ohms 1/16W | R70      | ERJ3RHD392  | Metal                   | 3.9K ohms 1/16W |
| R6       | ERJ3GEYJ392 | Carbon                             | 3.9K ohms 1/16W | R71      | ERJ3GEYJ392 | Carbon                  | 3.9K ohms 1/16W |
| R8       | ERJ3GEYJ752 | Carbon                             | 7.5K ohms 1/16W | R73      | ERJ3GEYJ752 | Carbon                  | 7.5K ohms 1/16W |
| R9       | ERJ3GEYJ512 | Carbon                             | 5.1K ohms 1/16W | R74      | ERJ3GEYJ512 | Carbon                  | 5.1K ohms 1/16W |
| R10,11   | ERJ3GEYJ362 | Carbon                             | 3.6K ohms 1/16W | R75      | ERJ3GEYJ562 | Carbon                  | 5.6K ohms 1/16W |
| R12,13   | ERJ3RHD331  | Metal                              | 330 ohms 1/16W  | R76,77   | ERJ3RHD331  | Metal                   | 330 ohms 1/16W  |
| R14      | ERJ3GEYJ103 | Carbon                             | 10K ohms 1/16W  | R78      | ERJ3GEYJ220 | Carbon                  | 22 ohms 1/16W   |
| R15      | ERJ3GEYJ220 | Carbon                             | 22 ohms 1/16W   | R79      | ERJ3GEYJ272 | Carbon                  | 2.7K ohms 1/16W |
| R16      | ERJ3GEYJ392 | Carbon                             | 3.9K ohms 1/16W | R80      | ERJ3GEYJ100 | Carbon                  | 10 ohms 1/16W   |
| R17      | ERJ3RHD182  | Metal                              | 1.8K ohms 1/16W | R81,82   | ERJ3GEYF750 | Carbon                  | 75 ohms 1/16W   |
| R18      | ERJ3RHD392  | Metal                              | 3.9K ohms 1/16W | R83      | ERJ3GEY0R00 | Carbon                  | 0 ohm 1/16W     |
| R19      | ERJ3GEYJ392 | Carbon                             | 3.9K ohms 1/16W |          |             | for AW-RP501/USA/Canada |                 |
| R21      | ERJ3GEYJ752 | Carbon                             | 7.5K ohms 1/16W | R84      | ERJ3GEYJ103 | Carbon                  | 10K ohms 1/16W  |
| R22      | ERJ3GEYJ512 | Carbon                             | 5.1K ohms 1/16W |          |             | for AW-RP501/B/G        |                 |
| R23      | ERJ3GEYJ562 | Carbon                             | 5.6K ohms 1/16W | R85      | ERJ3GEYJ103 | Carbon                  | 10K ohms 1/16W  |

| REF. NO. | PART NO.    | DESCRIPTION                                       | REF. NO. | PART NO.    | DESCRIPTION                                       |
|----------|-------------|---------------------------------------------------|----------|-------------|---------------------------------------------------|
| R86      | ERJ3GEYJ333 | Carbon 33K ohms 1/16W                             | R132     | ERJ3GEY0R00 | Carbon 0 ohm 1/16W                                |
| R87      | ERJ3GEYJ102 | Carbon 1K ohms 1/16W                              | R133     | ERJ3GEYJ273 | Carbon 27K ohms 1/16W                             |
| R88      | ERJ3GEYJ331 | Carbon 330 ohms 1/16W                             | R134     | ERJ3RHD243  | Metal 24K ohms 1/16W                              |
| R89      | ERJ3GEYJ103 | Carbon 10K ohms 1/16W                             | R135     | ERJ3RHD163  | Metal 16K ohms 1/16W                              |
| R90      | ERJ3GEYJ681 | Carbon 680 ohms 1/16W                             | R136     | ERJ3GEYJ103 | Carbon 10K ohms 1/16W                             |
| R91      | ERJ3GEYJ103 | Carbon 10K ohms 1/16W                             | R137     | ERJ3GEYJ332 | Carbon 3.3K ohms 1/16W                            |
| R92      | ERJ3GEYJ681 | Carbon 680 ohms 1/16W                             | R138     | ERJ3GEYJ681 | Carbon 680 ohms 1/16W                             |
| R93      | ERJ3GEYJ221 | Carbon 220 ohms 1/16W                             | R139     | ERJ3GEYJ222 | Carbon 2.2K ohms 1/16W                            |
| R94,95   | ERJ3GEYJ473 | Carbon 47K ohms 1/16W                             | R140     | ERJ3GEYJ223 | Carbon 22K ohms 1/16W<br>for AW-RP501/USA/Canada  |
| R96      | ERJ3GEYJ221 | Carbon 220 ohms 1/16W                             |          |             |                                                   |
| R97      | ERJ3GEYJ104 | Carbon 100K ohms 1/16W                            |          | ERJ3RHD223  | Metal 22K ohms 1/16W<br>for AW-RP501/B/G          |
| R98      | ERJ3GEYJ152 | Carbon 1.5K ohms 1/16W                            | R141     | ERJ3GEYJ183 | Carbon 18K ohms 1/16W<br>for AW-RP501/USA/Canada  |
| R99      | ERJ3GEYJ222 | Carbon 2.2K ohms 1/16W                            |          | ERJ3RHD183  | Metal 18K ohms 1/16W<br>for AW-RP501/B/G          |
| R100     | ERJ3GEYJ271 | Carbon 270 ohms 1/16W                             |          |             |                                                   |
| R101     | ERJ3GEYJ272 | Carbon 2.7K ohms 1/16W                            |          |             |                                                   |
| R102     | ERJ3GEY0R00 | Carbon 0 ohm 1/16W                                | R142     | ERJ3GEY0R00 | Carbon 0 ohm 1/16W                                |
| R103     | ERJ3GEYJ822 | Carbon 8.2K ohms 1/16W                            | R143     | ERJ3GEYJ392 | Carbon 3.9K ohms 1/16W                            |
| R104     | ERJ3GEYJ105 | Carbon 1M ohms 1/16W                              | R144     | ERJ3GEYJ273 | Carbon 27K ohms 1/16W                             |
| R105     | ERJ3GEYJ472 | Carbon 4.7K ohms 1/16W<br>for AW-RP501/USA/Canada | R146     | ERJ3GEYJ123 | Carbon 12K ohms 1/16W                             |
|          | ERJ3GEYJ102 | Carbon 1K ohms 1/16W<br>for AW-RP501/B/G          | R147     | ERJ3GEYJ822 | Carbon 8.2K ohms 1/16W                            |
| R106     | ERJ3GEYJ511 | Carbon 510 ohms 1/16W<br>for AW-RP501/USA/Canada  | R148     | ERJ3GEYJ103 | Carbon 10K ohms 1/16W                             |
|          | ERJ3GEYJ111 | Carbon 110 ohms 1/16W<br>for AW-RP501/B/G         | R149     | ERJ3GEYJ222 | Carbon 2.2K ohms 1/16W                            |
|          |             |                                                   | R150     | ERJ3GEYJ561 | Carbon 560 ohms 1/16W                             |
| R107     | ERJ3GEYJ101 | Carbon 100 ohms 1/16W                             | R151     | ERJ3GEYJ391 | Carbon 390 ohms 1/16W                             |
| R108     | ERJ3GEYJ472 | Carbon 4.7K ohms 1/16W                            | R152     | ERJ3GEYJ561 | Carbon 560 ohms 1/16W                             |
| R109     | ERJ3GEYJ151 | Carbon 150 ohms 1/16W                             | R153     | ERJ3GEYJ391 | Carbon 390 ohms 1/16W                             |
| R110     | ERJ3GEYJ681 | Carbon 680 ohms 1/16W                             | R154     | ERJ3GEYJ471 | Carbon 470 ohms 1/16W                             |
|          |             |                                                   | R155     | ERJ3GEYJ333 | Carbon 33K ohms 1/16W                             |
| R111     | ERJ3GEYJ105 | Carbon 1M ohms 1/16W                              | R156     | ERJ3GEYJ561 | Carbon 560 ohms 1/16W                             |
| R112     | ERJ3GEYJ102 | Carbon 1K ohms 1/16W                              | R157     | ERJ3GEYJ392 | Carbon 3.9K ohms 1/16W                            |
| R113     | ERJ3GEYJ103 | Carbon 10K ohms 1/16W                             | R158     | ERJ3GEYJ183 | Carbon 18K ohms 1/16W                             |
| R115     | ERJ3GEYJ102 | Carbon 1K ohms 1/16W                              | R159     | ERJ3GEYJ133 | Carbon 13K ohms 1/16W                             |
| R116     | ERJ3GEYJ822 | Carbon 8.2K ohms 1/16W                            | R160     | ERJ3GEYJ123 | Carbon 12K ohms 1/16W                             |
|          |             |                                                   | R161     | ERJ3GEYJ153 | Carbon 15K ohms 1/16W                             |
| R117     | ERJ3GEYJ102 | Carbon 1K ohms 1/16W                              | R162     | ERJ3GEYJ242 | Carbon 2.4K ohms 1/16W                            |
| R118     | ERJ3GEYJ682 | Carbon 6.8K ohms 1/16W                            | R163     | ERJ3RHD562  | Metal 5.6K ohms 1/16W                             |
| R119     | ERJ3GEYJ750 | Carbon 75 ohms 1/16W                              | R164     | ERJ3GEY0R00 | Carbon 0 ohm 1/16W                                |
| R120     | ERJ3GEYJ154 | Carbon 150K ohms 1/16W                            | R165     | ERJ3RHD112  | Metal 1.1K ohms 1/16W                             |
| R121     | ERJ3GEYJ104 | Carbon 100K ohms 1/16W                            | R166     | ERJ3RHD472  | Metal 4.7K ohms 1/16W                             |
| R122     | ERJ3GEYJ392 | Carbon 3.9K ohms 1/16W                            | R167     | ERJ3GEYJ222 | Carbon 2.2K ohms 1/16W                            |
| R123     | ERJ3GEYJ242 | Carbon 2.4K ohms 1/16W                            | R168     | ERJ3GEYJ242 | Carbon 2.4K ohms 1/16W                            |
| R124     | ERJ3GEYJ222 | Carbon 2.2K ohms 1/16W                            | R169     | ERJ3GEYJ243 | Carbon 24K ohms 1/16W                             |
| R125     | ERJ3GEYJ332 | Carbon 3.3K ohms 1/16W                            | R170     | ERJ3GEYJ183 | Carbon 18K ohms 1/16W                             |
| R126     | ERJ3GEYJ242 | Carbon 2.4K ohms 1/16W                            | R171     | ERJ3GEYJ272 | Carbon 2.7K ohms 1/16W                            |
| R127     | ERJ3GEYJ103 | Carbon 10K ohms 1/16W                             | R172     | ERJ3GEYJ152 | Carbon 1.5K ohms 1/16W                            |
| R128     | ERJ3GEYJ562 | Carbon 5.6K ohms 1/16W                            | R173     | ERJ3GEYJ272 | Carbon 2.7K ohms 1/16W<br>for AW-RP501/USA/Canada |
| R129     | ERJ3GEYJ621 | Carbon 620 ohms 1/16W                             |          | ERJ3RHD272  | Metal 2.7K ohms 1/16W<br>for AW-RP501/B/G         |
| R130     | ERJ3GEYJ684 | Carbon 680K ohms 1/16W                            |          |             |                                                   |
| R131     | ERJ3GEYJ562 | Carbon 5.6K ohms 1/16W                            |          |             |                                                   |

| REF. NO. | PART NO.    | DESCRIPTION                                       | REF. NO.   | PART NO.     | DESCRIPTION                                      |
|----------|-------------|---------------------------------------------------|------------|--------------|--------------------------------------------------|
| R174     | ERJ3GEYJ122 | Carbon 1.2K ohms 1/16W<br>for AW-RP501/USA/Canada | R534       | ERJ3GEYJ201  | Carbon 200 ohms 1/16W                            |
|          | ERJ3RHD122  | Metal 1.2K ohms 1/16W<br>for AW-RP501/B/G         | R535       | ERJ3GEYJ333  | Carbon 33K ohms 1/16W                            |
| R175     | ERJ3GEYJ152 | Carbon 1.5K ohms 1/16W<br>for AW-RP501/USA/Canada | R539       | ERJ3GEYJ201  | Carbon 200 ohms 1/16W                            |
|          | ERJ3RHD821  | Metal 820 ohms 1/16W<br>for AW-RP501/B/G          | R547       | ERJ3GEYJ201  | Carbon 200 ohms 1/16W<br>for AW-RP501/USA/Canada |
| R176-178 | ERJ3GEYJ561 | Carbon 560 ohms 1/16W                             |            | ERJ3GEYJ101  | Carbon 100 ohms 1/16W<br>for AW-RP501/B/G        |
| R179     | ERJ3GEYJ682 | Carbon 6.8K ohms 1/16W                            | R548-557   | ERJ3GEYJ201  | Carbon 200 ohms 1/16W                            |
| R180     | ERJ3GEYJ471 | Carbon 470 ohms 1/16W                             | R558       | ERJ3GEYJ470  | Carbon 47 ohms 1/16W<br>for AW-RP501/B/G         |
| R181     | ERJ3GEYJ561 | Carbon 560 ohms 1/16W<br>for AW-RP501/USA/Canada  |            |              |                                                  |
|          | ERJ3RHD561  | Metal 560 ohms 1/16W<br>for AW-RP501/B/G          | R559-562   | ERJ3GEYJ201  | Carbon 200 ohms 1/16W                            |
| R182     | ERJ3GEYJ102 | Carbon 1K ohms 1/16W<br>for AW-RP501/USA/Canada   | R563       | ERJ3GEY0R00  | Carbon 0 ohm 1/16W                               |
|          | ERJ3RHD102  | Metal 1K ohms 1/16W<br>for AW-RP501/B/G           | R564       | ERJ3GEYJ201  | Carbon 200 ohms 1/16W                            |
| R183     | ERJ3GEY0R00 | Carbon 0 ohm 1/16W<br>for AW-RP501/USA/Canada     | R565-569   | ERJ3GEY0R00  | Carbon 0 ohm 1/16W                               |
|          | ERJ3RHD560  | Carbon 56 ohms 1/16W<br>for AW-RP501/B/G          | R570       | ERJ3GEYJ201  | Carbon 200 ohms 1/16W<br>for AW-RP501/USA/Canada |
| R184     | ERJ3GEYJ101 | Carbon 100 ohms 1/16W                             |            | ERJ3GEYJ101  | Carbon 100 ohms 1/16W<br>for AW-RP501/B/G        |
| R185     | ERJ3RHD113  | Metal 11K ohms 1/16W                              | R571-589   | ERJ3GEYJ201  | Carbon 200 ohms 1/16W                            |
| R186     | ERJ3RHD682  | Metal 6.8K ohms 1/16W                             | R590-612   | ERJ3GEYJ472  | Carbon 4.7K ohms 1/16W                           |
| R187     | ERJ3GEYJ222 | Carbon 2.2K ohms 1/16W                            |            |              |                                                  |
| R188     | ERJ3GEYJ102 | Carbon 1K ohms 1/16W                              | R613-630   | ERJ3GEYJ201  | Carbon 200 ohms 1/16W                            |
| R189,190 | ERJ3GEYJ222 | Carbon 2.2K ohms 1/16W                            | R631       | ERJ3GEYJ273  | Carbon 27K ohms 1/16W                            |
| R191     | ERJ3GEYJ562 | Carbon 5.6K ohms 1/16W                            | R632,633   | ERJ3GEY0R00  | Carbon 0 ohm 1/16W                               |
| R193     | ERJ3GEYJ154 | Carbon 150K ohms 1/16W                            | R634,635   | ERJ3GEYJ201  | Carbon 200 ohms 1/16W                            |
| R194     | ERJ3GEYJ104 | Carbon 100K ohms 1/16W                            | R648-652   | ERJ3GEYJ473  | Carbon 47K ohms 1/16W                            |
| R195     | ERJ3GEYJ332 | Carbon 3.3K ohms 1/16W                            |            |              |                                                  |
| R196     | ERJ3GEYJ222 | Carbon 2.2K ohms 1/16W                            | R657       | ERJ3GEY0R00  | Carbon 0 ohm 1/16W                               |
| R197,198 | ERJ3GEYJ332 | Carbon 3.3K ohms 1/16W                            | R1001,1002 | ERJ6GEY0R00  | Carbon 0 ohm 1/16W<br>for AW-RP501/B/G           |
| R199     | ERJ3GEYJ101 | Carbon 100 ohms 1/16W                             | C1         | YWRVS1C470M  | Electrolytic 47 $\mu$ F 16V                      |
| R200     | ERJ3GEYJ103 | Carbon 10K ohms 1/16W                             | C2,4       | YGM1F104Z1ET | Ceramic 0.1 $\mu$ F 25V                          |
| R201     | ERJ3GEYJ472 | Carbon 4.7K ohms 1/16W                            | C6         | YWRVS1C220M  | Electrolytic 22 $\mu$ F 16V                      |
| R202     | ERJ3GEYJ750 | Carbon 75 ohms 1/16W                              | C8         | YWRVS1C470M  | Electrolytic 47 $\mu$ F 16V                      |
| R211     | ERJ3GEYJ103 | Carbon 10K ohms 1/16W                             | C9         | YGM1F104Z1ET | Ceramic 0.1 $\mu$ F 25V                          |
| R212     | ERJ3RHD822  | Metal 8.2K ohms 1/16W                             | C12        | YWRVS1C220M  | Electrolytic 22 $\mu$ F 16V                      |
| R213     | ERJ3RHD433  | Metal 43K ohms 1/16W                              | C13        | YGM1F104Z1ET | Ceramic 0.1 $\mu$ F 25V                          |
| R214-216 | ERJ3GEY0R00 | Carbon 0 ohm 1/16W                                | C14        | YWRVS1C470M  | Electrolytic 47 $\mu$ F 16V                      |
| R501-525 | ERJ3GEYJ472 | Carbon 4.7K ohms 1/16W                            | C15        | YGM1F104Z1ET | Ceramic 0.1 $\mu$ F 25V                          |
| R526-528 | ERJ3GEYJ104 | Carbon 100K ohms 1/16W                            | C16        | YWRVS1C470M  | Electrolytic 47 $\mu$ F 16V                      |
| R529     | ERJ3GEYJ105 | Carbon 1M ohms 1/16W                              | C17-19     | YGM1F104Z1ET | Ceramic 0.1 $\mu$ F 25V                          |
| R530     | ERJ3GEYJ101 | Carbon 100 ohms 1/16W                             | C20        | YWRVS1C470M  | Electrolytic 47 $\mu$ F 16V                      |
| R531     | ERJ3GEYJ104 | Carbon 100K ohms 1/16W                            | C21-26     | YGM1F104Z1ET | Ceramic 0.1 $\mu$ F 25V                          |
| R532     | ERJ3GEYJ222 | Carbon 2.2K ohms 1/16W                            | C27        | YW5CH100J5VT | Ceramic 10 pF                                    |
| R533     | ERJ3GEYJ101 | Carbon 100 ohms 1/16W                             | C28        | YGM1F104Z1ET | Ceramic 0.1 $\mu$ F 25V                          |
|          |             |                                                   | C29        | YW5CH102J5VT | Ceramic 1000 pF                                  |
|          |             |                                                   | C30-33     | YGM1F104Z1ET | Ceramic 0.1 $\mu$ F 25V                          |
|          |             |                                                   | C35        | YWRVS1C220M  | Electrolytic 22 $\mu$ F 16V                      |
|          |             |                                                   | C36        | YGM1F104Z1ET | Ceramic 0.1 $\mu$ F 25V                          |
|          |             |                                                   | C37        | YWRVS1C470M  | Electrolytic 47 $\mu$ F 16V                      |
|          |             |                                                   | C38        | YGM1F104Z1ET | Ceramic 0.1 $\mu$ F 25V                          |
|          |             |                                                   | C39        | YW5CH150J5VT | Ceramic 15 pF                                    |

| REF. NO. | PART NO.     | DESCRIPTION             |                  | REF. NO. | PART NO.     | DESCRIPTION      |                 |
|----------|--------------|-------------------------|------------------|----------|--------------|------------------|-----------------|
| C41      | YWRVS1C220M  | Electrolytic            | 22 $\mu$ F 16V   |          | YGM1C330J1HT | Ceramic          | 33 pF           |
| C42,43   | YGM1F104Z1ET | Ceramic                 | 0.1 $\mu$ F 25V  |          |              | for AW-RP501/B/G |                 |
| C44      | YWSK1C105KRA | Tantalum                | 1 $\mu$ F 16V    | C89      | YWRVS1C470M  | Electrolytic     | 47 $\mu$ F 16V  |
| C45      | YGM1F104Z1ET | Ceramic                 | 0.1 $\mu$ F 25V  | C90,91   | YWRVS1C220M  | Electrolytic     | 22 $\mu$ F 16V  |
| C46      | YWRVS1C470M  | Electrolytic            | 47 $\mu$ F 16V   |          |              |                  |                 |
| C47      | YGM1F104Z1ET | Ceramic                 | 0.1 $\mu$ F 25V  | C93      | YWCH511J5VT  | Ceramic          | 510 pF          |
| C48      | YWRVJ1C221M  | Electrolytic            | 220 $\mu$ F 16V  | C94,95   | YGM1F104Z1ET | Ceramic          | 0.1 $\mu$ F 25V |
| C49      | YWRVS1E100M  | Electrolytic            | 10 $\mu$ F 25V   | C96      | YW5CH471J5VT | Ceramic          | 470 pF          |
| C50      | YWRVS1C470M  | Electrolytic            | 47 $\mu$ F 16V   | C98      | YGM1F104Z1ET | Ceramic          | 0.1 $\mu$ F 25V |
| C51      | YWRVJ1C101M  | Electrolytic            | 100 $\mu$ F 16V  | C99      | YGM1C330J1HT | Ceramic          | 33 pF 50V       |
| C52      | YGM1F104Z1ET | Ceramic                 | 0.1 $\mu$ F 25V  | C100     | YGM1F104Z1ET | Ceramic          | 0.1 $\mu$ F 25V |
| C53      | YW5CH680J5VT | Ceramic                 | 68 pF            | C101     | YWRVJ1C101M  | Electrolytic     | 100 $\mu$ F 16V |
| C54      | YW5CH470J5VT | Ceramic                 | 47 pF            | C102     | YWRVS1C220M  | Electrolytic     | 22 $\mu$ F 16V  |
| C55      | YW5X103K5VT  | Ceramic                 | 0.01 $\mu$ F     | C103     | YWSK1C105KRA | Tantalum         | 1 $\mu$ F 16V   |
| C56      | YW5CH102J5VT | Ceramic                 | 1000 pF          | C104     | YWRVJ1C221M  | Electrolytic     | 220 $\mu$ F 16V |
| C57      | YWRVS1E4R7M  | Electrolytic            | 4.7 $\mu$ F 25V  | C105     | YWRVS1C220M  | Electrolytic     | 22 $\mu$ F 16V  |
| C58      | YWRVS1C470M  | Electrolytic            | 47 $\mu$ F 16V   | C106     | YWRVS1C470M  | Electrolytic     | 47 $\mu$ F 16V  |
| C59      | YGM1F104Z1ET | Ceramic                 | 0.1 $\mu$ F 25V  | C107     | YWRVP1E4R7M  | Electrolytic     | 4.7 $\mu$ F 25V |
| C60      | YW5X103K5VT  | Ceramic                 | 0.01 $\mu$ F     | C108     | YWRVS1C100M  | Electrolytic     | 10 $\mu$ F 16V  |
| C61      | YWRVS1E4R7M  | Electrolytic            | 4.7 $\mu$ F 25V  | C109     | YGM1C330J1HT | Ceramic          | 33 pF 50V       |
| C62      | YW5CH221J5VT | Ceramic                 | 220 pF           | C112     | YWRVS1C100M  | Electrolytic     | 10 $\mu$ F 16V  |
| C63      | YW5X152K5VT  | Ceramic                 | 1500 pF          | C113     | YGM1F104Z1ET | Ceramic          | 0.1 $\mu$ F 25V |
| C64      | YW5X153K2VT  | Ceramic                 | 0.015 $\mu$ F    | C114     | YWRVS1C100M  | Electrolytic     | 10 $\mu$ F 16V  |
| C65      | YWRVS1E4R7M  | Ceramic                 | 4.7 $\mu$ F 25V  | C115     | YWSK1C105KRA | Tantalum         | 1 $\mu$ F 16V   |
| C66      | YW5X103K5VT  | Ceramic                 | 0.01 $\mu$ F     | C116     | YWRVS1C100M  | Electrolytic     | 10 $\mu$ F 16V  |
| C67      | YWRVS1C470M  | Electrolytic            | 47 $\mu$ F 16V   | C117     | YWRVS1C470M  | Electrolytic     | 47 $\mu$ F 16V  |
| C68-70   | YW5X103K5VT  | Ceramic                 | 0.01 $\mu$ F     | C118     | YWRVJ1C101M  | Electrolytic     | 100 $\mu$ F 16V |
| C71      | YWRVS1HR47M  | Electrolytic            | 0.47 $\mu$ F 50V | C119     | YW5CH200J5VT | Ceramic          | 20 pF           |
| C72      | YGM1F104Z1ET | Ceramic                 | 0.1 $\mu$ F 25V  | C120     | YW5CH270J5VT | Ceramic          | 27 pF           |
| C73      | YWRVS1E4R7M  | Electrolytic            | 4.7 $\mu$ F 25V  | C121     | YW5CH101J5VT | Ceramic          | 100 pF          |
| C74      | YGM1F104Z1ET | Ceramic                 | 0.1 $\mu$ F 25V  | C123     | YW5CH040D5VT | Ceramic          | 4 pF            |
| C75      | YGM1C330J1HT | Ceramic                 | 33 pF 50V        | C124     | YWRVS1C100M  | Electrolytic     | 10 $\mu$ F 16V  |
|          |              | for AW-RP501/USA/Canada |                  | C125-127 | YGM1F104Z1ET | Ceramic          | 0.1 $\mu$ F 25V |
|          | YW5CH101J5VT | Ceramic                 | 100 pF           | C128,130 | YWRVS1C100M  | Electrolytic     | 10 $\mu$ F 16V  |
|          |              | for AW-RP501/B/G        |                  | C131     | YWRVS1C470M  | Electrolytic     | 47 $\mu$ F 16V  |
| C76      | YW5CH620J5VT | Ceramic                 | 62 pF            | C132     | YWRVS1C220M  | Electrolytic     | 22 $\mu$ F 16V  |
|          |              | for AW-RP501/USA/Canada |                  | C133     | YW5CH100J5VT | Ceramic          | 10 pF           |
|          | YW5CH101J5VT | Ceramic                 | 100 pF           | C134,135 | YWRVS1C220M  | Electrolytic     | 22 $\mu$ F 16V  |
|          |              | for AW-RP501/B/G        |                  | C136     | 5F224Z1VT    | Ceramic          | 0.22 $\mu$ F    |
| C77      | YGM1C330J1HT | Ceramic                 | 33 pF 50V        | C137     | RVJ1C221M    | Electrolytic     | 220 $\mu$ F 16V |
|          |              | for AW-RP501/USA/Canada |                  |          |              |                  |                 |
|          | YW5CH101J5VT | Ceramic                 | 100 pF           | C138     | YWRVS1C220M  | Electrolytic     | 22 $\mu$ F 16V  |
|          |              | for AW-RP501/B/G        |                  | C142     | YGM1F104Z1ET | Ceramic          | 0.1 $\mu$ F 25V |
| C78      | YGM1F104Z1ET | Ceramic                 | 0.1 $\mu$ F 25V  | C143     | YWRVS1C470M  | Electrolytic     | 47 $\mu$ F 16V  |
| C79,80   | YW5X103K5VT  | Ceramic                 | 0.01 $\mu$ F     | C144     | YGM1F104Z1ET | Ceramic          | 0.1 $\mu$ F 25V |
|          |              |                         |                  | C145,146 | YWRVS1C470M  | Electrolytic     | 47 $\mu$ F 16V  |
| C81,82   | YGM1F104Z1ET | Ceramic                 | 0.1 $\mu$ F 25V  | C147     | YWRVS1C220M  | Electrolytic     | 22 $\mu$ F 16V  |
| C85      | YWRVS1C100M  | Electrolytic            | 10 $\mu$ F 16V   | C501-527 | YGM1F104Z1ET | Ceramic          | 0.1 $\mu$ F 25V |
| C86      | YGM1F104Z1ET | Ceramic                 | 0.1 $\mu$ F 25V  | C528     | YWRVS0J220M  | Electrolytic     | 22 $\mu$ F 6.3V |
| C87      | YWRVP1HR47M  | Electrolytic            | 0.47 $\mu$ F 50V | C529-532 | YGM1F104Z1ET | Ceramic          | 25 V 0.1UF      |
| C88      | YW5CH620J5VT | Ceramic                 | 62 pF            | C533,534 | YWCH220J5VT  | Ceramic          | 22 pF           |
|          |              | for AW-RP501/USA/Canada |                  |          |              |                  |                 |

| REF. NO. | PART NO.      | DESCRIPTION                                            | REF. NO.   | PART NO.     | DESCRIPTION                |
|----------|---------------|--------------------------------------------------------|------------|--------------|----------------------------|
| C535     | YGM1F105Z1AT  | Ceramic 1 $\mu$ F 10V                                  | FL3        | YWCY4T139    | Filter                     |
| C536     | YWSK51A106MA  | Tantalum 10 $\mu$ F 10V                                | FL4        | CSB503F2     | Filter                     |
| C537-540 | YGM1F104Z1ET  | Ceramic 0.1 $\mu$ F 25V                                | FL501      | YWZJK5103-05 | Noise Filter               |
| C541     | YWSK41C475KA  | Tantalum 4.7 $\mu$ F 16V                               | E1         | YWCP501YC01B | Wire                       |
| C542-544 | YGM1F104Z1ET  | Ceramic 0.1 $\mu$ F 25V                                | E2         | YWCP501YC02B | Wire                       |
| C545,546 | YWSK31D225MRA | Tantalum 2.2 $\mu$ F 20V                               |            |              |                            |
| C547     | YWSK41C106MB  | Tantalum 10 $\mu$ F 16V                                |            |              |                            |
| C548-550 | YGM1F104Z1ET  | Ceramic 0.1 $\mu$ F 25V                                |            |              |                            |
| C551,552 | YWRVS1C100M   | Electrolytic 10 $\mu$ F 16V                            |            |              |                            |
| C558,559 | YGM1F104Z1ET  | Ceramic 0.1 $\mu$ F 25V                                |            |              |                            |
| C564     | YGM1F104Z1ET  | Ceramic 0.1 $\mu$ F 25V                                |            |              |                            |
| C565     | YWSK41C475KA  | Tantalum 4.7 $\mu$ F 16V                               |            |              |                            |
| C566     | YWSK41C106MB  | Tantalum 10 $\mu$ F 16V                                |            |              |                            |
| C567     | YW5CH101J5VT  | Ceramic 100 pF                                         |            |              |                            |
| C568     | YWSK41C106MB  | Tantalum 10 $\mu$ F 16V                                |            |              |                            |
| C570     | YW5CH470J5VT  | Ceramic 47 pF                                          |            |              |                            |
| C571,572 | YGM1F104Z1ET  | Ceramic 0.1 $\mu$ F 25V                                |            |              |                            |
| C575-579 | YGM1F104Z1ET  | Ceramic 0.1 $\mu$ F 25V                                |            |              |                            |
| C593     | YGM1F104Z1ET  | Ceramic 0.1 $\mu$ F 25V                                |            |              |                            |
| C594-597 | YW5CH101J5VT  | Ceramic 100 pF                                         |            |              |                            |
| X503     | AXS628129P    | IC Socket                                              |            |              |                            |
| L1-4     | YWNL321100J   | Coil 10 $\mu$ H<br>for AW-RP501/USA/Canada             |            |              |                            |
| L1,4     | YWNL321100J   | Coil 10 $\mu$ H<br>for AW-RP501/B/G                    |            |              |                            |
| L6,7     | YWNL321100J   | Coil 10 $\mu$ H                                        |            |              |                            |
| L8-10    | YWNL321390J   | Coil 39 $\mu$ H                                        |            |              |                            |
| L11      | YWNL321150J   | Coil 15 $\mu$ H                                        |            |              |                            |
| P1       | YW53261-0890  | 8-pin Connector                                        |            |              |                            |
| P2       | YW53261-1490  | 14-pin Connector                                       |            |              |                            |
| P601     | YW53261-0690  | 6-pin Connector                                        |            |              |                            |
| P603     | YW53261-0790  | 7-pin Connector                                        |            |              |                            |
| P604     | YW53261-1190  | 11-pin Connector                                       |            |              |                            |
| P605     | YW53261-1490  | 14-pin Connector                                       |            |              |                            |
| P606     | 53261-1590    | 15-pin Connector                                       |            |              |                            |
| P607     | YW53261-1390  | 13-pin Connector                                       |            |              |                            |
| P608     | YW53261-1490  | 14-pin Connector                                       |            |              |                            |
| P611     | YW53261-0790  | 7-pin Connector                                        |            |              |                            |
| Y1       | YWUM14318VCO  | Crystal Oscillator 14.3 MHz<br>for AW-RP501/USA/Canada |            |              |                            |
|          | YWUM17734VCO  | Crystal Oscillator 17.7 MHz<br>for AW-RP501/B/G        |            |              |                            |
| Y501     | YWAT5120MHZ   | Crystal Oscillator 20 MHz                              |            |              |                            |
| FL1      | YWCY4T140     | Filter<br>for AW-RP501/USA/Canada                      |            |              |                            |
|          | YWCY4T139     | Filter<br>for AW-RP501/B/G                             |            |              |                            |
| FL2      | YWCY4T138     | Filter<br>for AW-RP501/USA/Canada                      |            |              |                            |
|          | YWCY4T140     | Filter<br>for AW-RP501/B/G                             |            |              |                            |
|          |               |                                                        | PCB2 (RTL) | YWWRP51JKZ1A | Printed Circuit Board Assy |
|          |               |                                                        | U1         | NJM2904M     | IC                         |
|          |               |                                                        | U6-8       | YWMC14051BF  | IC                         |
|          |               |                                                        | U9         | NJM2902M     | IC                         |
|          |               |                                                        | U10        | NJM2904M     | IC                         |
|          |               |                                                        | U11        | YWMC74HC32AF | IC                         |
|          |               |                                                        | U12        | MC74HC125AF  | IC                         |
|          |               |                                                        | U13        | YWYMC14050BF | IC                         |
|          |               |                                                        | U14        | YWNJM4556AM  | IC                         |
|          |               |                                                        | U15        | MC74HC132AF  | IC                         |
|          |               |                                                        | U16,17     | NJM2903M     | IC                         |
|          |               |                                                        | U18        | NJM2904M     | IC                         |
|          |               |                                                        | U19        | TL092CPS     | IC                         |
|          |               |                                                        | U20        | MN18888CUL   | IC                         |
|          |               |                                                        | U21        | YWMC14051BF  | IC                         |
|          |               |                                                        | U22        | YWM51957BFP  | IC                         |
|          |               |                                                        | Q1-3       | 2SB1218QRS   | Transistor                 |
|          |               |                                                        | Q4         | 2SB1218QRS   | Transistor                 |
|          |               |                                                        | Q6,7       | 2SD1819QRS   | Transistor                 |
|          |               |                                                        | Q8         | 2SB1219QRS   | Transistor                 |
|          |               |                                                        | Q9         | 2SD1819QRS   | Transistor                 |
|          |               |                                                        | Q11        | 2SB1218QRS   | Transistor                 |
|          |               |                                                        | D1         | MA142K       | Diode                      |
|          |               |                                                        | D2         | YWERB83004   | Diode                      |
|          |               |                                                        | D3         | MA142K       | Diode                      |

| REF. NO. | PART NO.     | DESCRIPTION       |                 | REF. NO. | PART NO.     | DESCRIPTION       |                 |
|----------|--------------|-------------------|-----------------|----------|--------------|-------------------|-----------------|
| D4       | YWERB83004   | Diode             |                 | R75      | ERJ3GEYJ682  | Carbon            | 6.8K ohms 1/16W |
| D5,6     | MA143        | Diode             |                 | R76      | ERJ3GEYJ103  | Carbon            | 10K ohms 1/16W  |
| D7       | MA142K       | Diode             |                 | R77      | ERJ3GEYJ203  | Carbon            | 20K ohms 1/16W  |
| D8       | LN238RPH     | LED               |                 | R78      | ERJ3GEYJ471  | Carbon            | 470 ohms 1/16W  |
| D9,11    | LN338GPH     | LED               |                 | R79,80   | ERJ3GEYJ153  | Carbon            | 15K ohms 1/16W  |
| D12      | MA142K       | Diode             |                 | R81      | ERJ3GEYJ471  | Carbon            | 470 ohms 1/16W  |
| D13      | MA143        | Diode             |                 | R82      | ERJ3GEYJ682  | Carbon            | 6.8K ohms 1/16W |
| D14      | MA142K       | Diode             |                 | R83      | ERJ3GEYJ103  | Carbon            | 10K ohms 1/16W  |
| D15      | MA165        | Diode             |                 | R84      | ERJ3GEYJ203  | Carbon            | 20K ohms 1/16W  |
| D17,20   | LN238RPH     | LED               |                 | R85,87   | ERJ3GEYJ103  | Carbon            | 10K ohms 1/16W  |
| R1       | ERJ3GEYJ911  | Carbon            | 910 ohms 1/16W  | R90      | ERJ3GEY0R00  | Carbon            | 0 ohm 1/16W     |
| R2       | ERJ3GEYJ103  | Carbon            | 10K ohms 1/16W  | R91      | ERJ3GEYJ473  | Carbon            | 47K ohms 1/16W  |
| R3       | ERJ3GEYJ303  | Carbon            | 30K ohms 1/16W  | R92      | ERJ3GEYJ101  | Carbon            | 100 ohms 1/16W  |
| R4       | ERJ3GEYJ103  | Carbon            | 10K ohms 1/16W  | R95      | ERJ3GEYJ473  | Carbon            | 47K ohms 1/16W  |
| R5       | ERJ3GEYJ181  | Carbon            | 180 ohms 1/16W  | R96      | ERJ3RHD202   | Metal             | 2K ohms 1/16W   |
| R6       | ERJ3GEYJ203  | Carbon            | 20K ohms 1/16W  | R97      | ERJ3RHD472   | Metal             | 4.7K ohms 1/16W |
| R7       | ERJ3GEYJ103  | Carbon            | 10K ohms 1/16W  | R98      | ERJ3GEYJ510  | Carbon            | 51 ohms 1/16W   |
| R8       | ERJ3GEYJ152  | Carbon            | 1.5K ohms 1/16W | R99      | ERJ3GEYJ473  | Carbon            | 47K ohms 1/16W  |
| R9       | R9L11420K2   | Variable Resistor | 20K ohms        | R100     | ERJ3GEY0R00  | Carbon            | 0 ohm 1/16W     |
| R10      | ERJ3GEYJ152  | Carbon            | 1.5K ohms 1/16W | R101     | ERJ3GEYJ473  | Carbon            | 47K ohms 1/16W  |
| R11-20   | ERJ3GEYJ470  | Carbon            | 47 ohms 1/16W   | R102,103 | ERJ3GEYJ221  | Carbon            | 220 ohms 1/16W  |
| R21,22   | ERJ3GEYJ621  | Carbon            | 620 ohms 1/16W  | R106     | ERJ3GEYJ102  | Carbon            | 1K ohms 1/16W   |
| R23,24   | ERJ3GEYJ331  | Carbon            | 330 ohms 1/16W  | R107     | ERJ3GEYJ104  | Carbon            | 100K ohms 1/16W |
| R25-34   | ERJ3GEYJ470  | Carbon            | 47 ohms 1/16W   | R108     | ERJ3GEYJ101  | Carbon            | 100 ohms 1/16W  |
| R45,46   | ERJ3GEYJ153  | Carbon            | 15K ohms 1/16W  | R109     | ERJ3GEYJ473  | Carbon            | 47K ohms 1/16W  |
| R47      | ERJ3GEYJ273  | Carbon            | 27K ohms 1/16W  | R110     | ERJ3GEYJ391  | Carbon            | 390 ohms 1/16W  |
| R48      | ERJ3GEYJ153  | Carbon            | 15K ohms 1/16W  | R111     | ERJ3GEYJ911  | Carbon            | 910 ohms 1/16W  |
| R49      | ERJ3GEYJ152  | Carbon            | 1.5K ohms 1/16W | R112-117 | ERJ3GEYJ331  | Carbon            | 330 ohms 1/16W  |
| R50      | RK9D11320K   | Variable Resistor | 20K ohms        | R118     | ERJ3GEYJ102  | Carbon            | 1K ohms 1/16W   |
| R51      | ERJ3GEYJ152  | Carbon            | 1.5K ohms 1/16W | R119-122 | ERJ3GEYJ104  | Carbon            | 100K ohms 1/16W |
| R52      | ERJ3GEYJ104  | Carbon            | 100K ohms 1/16W | R123     | ERJ3RHD103   | Metal             | 10K ohms 1/16W  |
| R53      | ERJ3GEYJ473  | Carbon            | 47K ohms 1/16W  | R124     | ERJ3RHD303   | Metal             | 30K ohms 1/16W  |
| R54      | ERJ3GEYJ103  | Carbon            | 10K ohms 1/16W  | R125     | ERJ3RHD103   | Metal             | 10K ohms 1/16W  |
| R55      | ERJ3GEYJ104  | Carbon            | 100K ohms 1/16W | R128,129 | ERJ3GEY0R00  | Carbon            | 0 ohm 1/16W     |
| R56,57   | ERJ3GEYJ153  | Carbon            | 15K ohms 1/16W  | R130     | EXBLD8503G   | Block Resistor    | 50K ohms 1/16W  |
| R58      | ERJ3GEYJ471  | Carbon            | 470 ohms 1/16W  | R131     | ERJ3GEYJ101  | Carbon            | 100 ohms 1/16W  |
| R59      | ERJ3GEYJ473  | Carbon            | 47K ohms 1/16W  | R135     | ERJ3GEYJ153  | Carbon            | 15K ohms 1/16W  |
| R60      | ERJ3GEYJ471  | Carbon            | 470 ohms 1/16W  | R136     | YWRK9D11320K | Variable Resistor | 20K ohms        |
| R61      | ERJ3GEYJ153  | Carbon            | 15K ohms 1/16W  | R137     | ERJ3GEYJ153  | Carbon            | 15K ohms 1/16W  |
| R62      | ERJ3GEYJ473  | Carbon            | 47K ohms 1/16W  | R138     | ERJ3GEYJ203  | Carbon            | 20K ohms 1/16W  |
| R63      | ERJ3GEYJ153  | Carbon            | 15K ohms 1/16W  | R139     | YWRK9D11320K | Variable Resistor | 20K ohms        |
| R64      | ERJ3GEYJ152  | Carbon            | 1.5K ohms 1/16W | R140     | ERJ3GEYJ562  | Carbon            | 5.6K ohms 1/16W |
| R65      | YWRK9D11320K | Variable Resistor | 20K ohms        | R141-143 | ERJ3GEYJ102  | Carbon            | 1K ohms 1/16W   |
| R66,67   | ERJ3GEYJ152  | Carbon            | 1.5K ohms 1/16W | R144     | ERJ3GEYJ272  | Carbon            | 2.7K ohms 1/16W |
| R68      | YWRK9D11310K | Variable Resistor | 10K             | R145     | ERJ3RHD104   | Metal             | 100K ohms 1/16W |
| R69      | ERJ3GEYJ152  | Carbon            | 1.5K ohms 1/16W | R146     | ERJ3RHD302   | Metal             | 3K ohms 1/16W   |
| R70      | ERJ3GEYJ153  | Carbon            | 15K ohms 1/16W  | R147     | ERJ3RHD473   | Metal             | 47K ohms 1/16W  |
| R71      | ERJ3GEYJ471  | Carbon            | 470 ohms 1/16W  | R148     | ERJ3RHD302   | Metal             | 3K ohms 1/16W   |
| R72,73   | ERJ3GEYJ153  | Carbon            | 15K ohms 1/16W  | R149     | ERJ3RHD473   | Metal             | 47K ohms 1/16W  |
| R74      | ERJ3GEYJ471  | Carbon            | 470 ohms 1/16W  | R150     | ERJ3RHD104   | Metal             | 100K ohms 1/16W |

| REF. NO. | PART NO.     | DESCRIPTION  |                  | REF. NO. | PART NO.     | DESCRIPTION  |                  |
|----------|--------------|--------------|------------------|----------|--------------|--------------|------------------|
| R151-160 | ERJ3GEYJ102  | Carbon       | 1K ohms 1/16W    | C31      | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  |
| R161-167 | ERJ3GEYJ473  | Carbon       | 47K ohms 1/16W   | C32      | YWRVS1H1R0M  | Electrolytic | 1 $\mu$ F 50V    |
| R168-171 | ERJ3GEYJ272  | Carbon       | 2.7K ohms 1/16W  | C33,34   | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  |
| R172     | ERJ3GEYJ473  | Carbon       | 47K ohms 1/16W   | C35      | YWRVS0J470M  | Electrolytic | 47 $\mu$ F 6.3V  |
| R173     | ERJ3GEYJ273  | Carbon       | 27K ohms 1/16W   | C36      | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  |
| R175,176 | ERJ3GEYJ102  | Carbon       | 1K ohms 1/16W    | C37-39   | RVS0J470M    | Electrolytic | 47 $\mu$ F 6.3V  |
| R177-180 | ERJ3GEYJ473  | Carbon       | 47K ohms 1/16W   | C40,41   | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  |
| R181,182 | ERJ3RHD104   | Metal        | 100K ohms 1/16W  | C42-44   | YW5CH101J5VT | Ceramic      | 100 pF           |
| R183     | ERJ3GEYJ472  | Carbon       | 4.7K ohms 1/16W  | C45      | YWRVS1C470M  | Electrolytic | 47 $\mu$ F 16V   |
| R184     | ERJ3GEYJ273  | Carbon       | 27K ohms 1/16W   | C46      | YWRVS0J470M  | Electrolytic | 47 $\mu$ F 6.3V  |
| R185,187 | ERJ3GEY0R00  | Carbon       | 0 ohm 1/16W      | C47      | YW5CH101J5VT | Ceramic      | 100 pF           |
| R188     | ERJ3GEYJ472  | Carbon       | 4.7K ohms 1/16W  | C48      | YWRVS0J101M  | Electrolytic | 100 $\mu$ F 6.3V |
| R190     | ERJ3GEYJ103  | Carbon       | 10K ohms 1/16W   | C49,50   | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  |
| R192     | ERJ3GEYJ472  | Carbon       | 4.7K ohms 1/16W  | C51      | YWRVP0J470M  | Electrolytic | 47 $\mu$ F 6.3V  |
| R193     | ERJ3RHD123   | Metal        | 12K ohms 1/16W   | C53      | YW5CH101J5VT | Ceramic      | 100 pF           |
| R194     | ERJ3RHD472   | Metal        | 4.7K ohms 1/16W  | C54      | YGM1B102K1HT | Ceramic      | 1000 pF 50V      |
| R195     | ERJ3GEYJ182  | Carbon       | 1.8K ohms 1/16W  | C55      | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  |
| R196-199 | ERJ3GEYJ473  | Carbon       | 47K ohms 1/16W   | C56      | YWRVP1A330M  | Electrolytic | 33 $\mu$ F 10V   |
| R202     | ERJ3GEYJ153  | Carbon       | 15K ohms 1/16W   | C57,58   | YWRVS0J470M  | Electrolytic | 47 $\mu$ F 6.3V  |
| R203-205 | ERJ3GEYJ473  | Carbon       | 47K ohms 1/16W   | C59      | YWRVS1C470M  | Electrolytic | 47 $\mu$ F 16V   |
| R206     | ERJ3GEYJ470  | Carbon       | 47 ohms 1/16W    | C60,61   | YW5CH151J5VT | Ceramic      | 150 pF           |
| R207     | ERJ3GEYJ272  | Carbon       | 2.7K ohms 1/16W  | C62      | YWRVS0J470M  | Electrolytic | 47 $\mu$ F 6.3V  |
| R211     | ERJ3GEYJ473  | Carbon       | 47K ohms 1/16W   | C63      | YWRVS0J101M  | Electrolytic | 100 $\mu$ F 6.3V |
| R212     | ERJ3GEYJ153  | Carbon       | 15K ohms 1/16W   | C64-66   | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  |
| R219     | ERJ3GEYJ911  | Carbon       | 910 ohms 1/16W   | C67      | YW5CH101J5VT | Ceramic      | 100 pF           |
| R220     | ERJ3GEY0R00  | Carbon       | 0 ohm 1/16W      | C68      | YWRVS1C470M  | Electrolytic | 47 $\mu$ F 16V   |
| R221,222 | ERJ3GEYJ153  | Carbon       | 15K ohms 1/16W   | C69      | YWRVS0J470M  | Electrolytic | 47 $\mu$ F 6.3V  |
| R223     | ERJ3GEY0R00  | Carbon       | 0 ohm 1/16W      | C71      | YW5CH151J5VT | Ceramic      | 150 pF           |
| C1-3     | YWRVS0J470M  | Electrolytic | 47 $\mu$ F 6.3V  | C72      | YWSK41A476MC | Tantalum     | 47 $\mu$ F 10V   |
| C4       | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  | C73      | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  |
| C5,6     | YWRVS0J470M  | Electrolytic | 47 $\mu$ F 6.3V  | C74,75   | SK41A476MC   | Tantalum     | 47 $\mu$ F 10V   |
| C7       | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  | C76      | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  |
| C8       | YWRVS1H1R0M  | Electrolytic | 1 $\mu$ F 50V    | C77      | YWRVJ1C221M  | Electrolytic | 220 $\mu$ F 16V  |
| C9,10    | YWRVS0J470M  | Electrolytic | 47 $\mu$ F 6.3V  | C78      | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  |
| C11      | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  | C79      | YWRVS1H1R0M  | Electrolytic | 1 $\mu$ F 50V    |
| C12      | YWRVS0J101M  | Electrolytic | 100 $\mu$ F 6.3V | C81      | YGM1C330J1HT | Ceramic      | 33 pF 50V        |
| C13      | YWRVJ1C101M  | Electrolytic | 100 $\mu$ F 16V  | C82      | YWRVS1C470M  | Electrolytic | 47 $\mu$ F 16V   |
| C14      | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  | C85,86   | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  |
| C15      | YWRVJ1C101M  | Electrolytic | 100 $\mu$ F 16V  | C87      | YWSK1V104KRA | Tantalum     | 0.1 $\mu$ F 35V  |
| C16      | YWRVJ1E101M  | Electrolytic | 100 $\mu$ F 25V  | C88-90   | YWRVS0J470M  | Electrolytic | 47 $\mu$ F 6.3V  |
| C17      | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  | C91      | YWRVS1H1R0M  | Electrolytic | 1 $\mu$ F 50V    |
| C18      | YWRVS0J101M  | Electrolytic | 100 $\mu$ F 6.3V | C92      | YWRVJ1C221M  | Electrolytic | 220 $\mu$ F 16V  |
| C19      | YWRVJ1C101M  | Electrolytic | 100 $\mu$ F 16V  | C93      | SK31C476MRD0 | Tantalum     | 47 $\mu$ F 16V   |
| C20      | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  | L1-3     | YWNL32100J   | Coil         | 10 $\mu$ H       |
| C21      | SK31C476MRD0 | Tantalum     | 47 $\mu$ F 16V   | L4       | YWNL321R0J   | Coil         | 1.0 $\mu$ H      |
| C22      | YWRVJ1E101M  | Electrolytic | 100 $\mu$ F 25V  | SF1      | YWSRFC2AT4   | Current Fuse | 2A               |
| C23-25   | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  | Y1       | EFOGC8004A4  | Resonator    |                  |
| C26      | YWRVS1H1R0M  | Electrolytic | 1 $\mu$ F 50V    | S1-8     | SSSF022P9N   | Slide Switch |                  |
| C27,28   | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  | S9-13    | 15EL1220000  | Switch       |                  |
| C29,30   | YWRVS1H1R0M  | Electrolytic | 1 $\mu$ F 50V    | S14      | 13AL0600040  | Switch D     |                  |

| REF. NO.   | PART NO.     | DESCRIPTION                | REF. NO.                                                                                                               | PART NO.                                                                                                                                                                                                                           | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                        |
|------------|--------------|----------------------------|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| S15        | 13AL0600050  | Switch Y                   | JOYSTICK BOARD                                                                                                         |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                    |
| S16-20     | 15EL1220000  | Switch                     | PCB4 (RTL)<br>R1-3<br>R4-31<br>SW1-6<br>P1                                                                             | YWWRP51JKY1A<br>YWRKJXC10KB2<br>ERJ8GEY0R00<br>SSSS22211<br>YW53254-0710                                                                                                                                                           | Printed Circuit Board Assy<br>Variable Resistor 10K ohms<br>Carbon 0 ohm 1/16W<br>Slide Switch<br>Connector                                                                                                                                                                                                                                                                                        |
| S26,28     | YWSSSF022P9N | Slide Switch               |                                                                                                                        |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                    |
| S29        | YWSSSF023P9N | Slide Switch               |                                                                                                                        |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                    |
| S31,32     | YWSKEVAC     | Tact Switch                |                                                                                                                        |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                    |
| S33        | YWSSSF024P9N | Slide Switch               |                                                                                                                        |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                    |
| S34        | YWSSSF023P9N | Slide Switch               |                                                                                                                        |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                    |
| S35        | S2150        | Rotary Switch              | ACCESSORY PARTS/PACKAGING PARTS                                                                                        |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                    |
| S36        | YWSSSB022P6N | Slide Switch               | M30<br>M38<br>M35<br><br>M31<br><br>M32<br>M33<br>M34 ⚠<br><br>M37<br><br>M39<br>M40<br>M41<br>M42<br><br>YWV8FA0140A4 | YWT050803<br>YWT20X25C03<br>YVW22XPRB99S<br><br>YW1B1A466A<br><br>YW7G1A653A<br>YWPE26X40C05<br>YW7J1A077A<br><br>YW7J1A078A<br>YWA5PA0074A3<br><br>XZB35X50C05<br>YW0C1A009AA<br>YVW8FA0070A4<br>YVW8FA0137A4<br><br>YVW8FA0140A4 | Polyethylene Bag<br>Polyethylene Bag<br>Service Center List for<br>AW-RP501/USA/Canada<br>Joint Angle<br><br>Label<br>Polyethylene Bag<br>Operating Instructions for<br>AW-RP501/USA/Canada<br>Operating Instructions for AW-RP501B/G<br>Rack Angle<br><br>Polyethylene Bag<br>Packaging Ass'y<br>Packaging Label<br>Packaging Label for<br>AW-RP501/USA/Canada<br>Packaging Label for AW-RP501B/G |
| S37-39     | 13AL0600000  | Switch                     |                                                                                                                        |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                    |
| S40        | YWSSSF022P6N | Slide Switch               |                                                                                                                        |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                    |
| P1         | YWCP501SW01A | Wire                       |                                                                                                                        |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                    |
| P2         | YWCP501SW02A | Wire                       |                                                                                                                        |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                    |
| P101       | YWCP501SW03A | Wire                       |                                                                                                                        |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                    |
| P102       | YWCP501SW04A | Wire                       |                                                                                                                        |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                    |
| REAR BOARD |              |                            |                                                                                                                        |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                    |
| PCB3 (RTL) | YWWRP51JKY2A | Printed Circuit Board Assy |                                                                                                                        |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                    |
| R1,2       | ERDS2TJ750   | Carbon 75 ohms 1/4W        |                                                                                                                        |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                    |
| R3,4       | EROS2CKF75R0 | Metal 75 ohms 1/4W         |                                                                                                                        |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                    |
| R6-8       | ERDS2TJ750   | Carbon 75 ohms 1/4W        |                                                                                                                        |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                    |
| C1-8       | ECKF1E103ZV  | Ceramic 0.01 μF 25V        |                                                                                                                        |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                    |
| C9-16      | 400103XKT    | Ceramic 0.01 μF            |                                                                                                                        |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                    |
| P1         | ML40S1CX2P   | 2-pin Terminal             |                                                                                                                        |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                    |
| P2         | 285D9880J101 | Jack                       |                                                                                                                        |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                    |
| P3         | YWM1824      | Connector                  |                                                                                                                        |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                    |
| P5         | YWM0092      | 8-pin DIN Connector        |                                                                                                                        |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                    |
| P6         | YWP2324B     | BNC Connector              |                                                                                                                        |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                    |
| P7         | YWP2243      | Connector                  |                                                                                                                        |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                    |
| P101       | YWCP501RE01A | Wire                       |                                                                                                                        |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                    |
| P102       | YWCP501RE02A | Wire                       |                                                                                                                        |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                    |
| P103       | YWCP501RE03A | Wire                       |                                                                                                                        |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                    |
| P105       | YWCP501RE04A | Wire                       |                                                                                                                        |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                    |

| REF. NO.             | PART NO.       | DESCRIPTION                        | REF. NO.          | PART NO.     | DESCRIPTION                |
|----------------------|----------------|------------------------------------|-------------------|--------------|----------------------------|
| <b>AW-RP505</b>      |                |                                    | <b>MAIN BOARD</b> |              |                            |
| <b>MISCELLANEOUS</b> |                |                                    | PCB1 (RTL)        | YWWRP55JKZ2A | Printed Circuit Board Assy |
| U101                 | YWNJM7809FA    | IC                                 | U13               | YWNJM2267M   | IC                         |
| U102                 | YWNJM7805FA    | IC                                 | U501,502          | MC74HC240AF  | IC                         |
| U103                 | YWNJM7809FA    | IC                                 | U504              | YWHM6264BLFP | IC                         |
| U104                 | YWNJM7805FA    | IC                                 | U505              | KL5C8012CFP  | IC                         |
| U105                 | HN27C256AFP    | Memory Device (ROM)                | U506              | SN74LS04NS   | IC                         |
| J101                 | HEC075701003   | DC Jack                            | U507              | MC74HC244AF  | IC                         |
| CN101                | YWM0092        | 8-pin DIN Connector                | U508              | SN74LS04NS   | IC                         |
| CN102                | AXS62822       | IC Socket Guide                    | U509              | YWTD62083F   | IC                         |
| E101                 | ML40S1CXS6P    | 6-pin Terminal                     | U510              | YWTL7705CPS  | IC                         |
| E102                 | YWCP501CP01B   | Wire                               | U512              | YWTD62083F   | IC                         |
| E103                 | YWCP501CP02B   | Wire                               | U513              | YWSN75179BPS | IC                         |
| E104                 | YWCP501CP03B   | Wire                               | U514              | MC74HC4051F  | IC                         |
| E105                 | YWCP501CP03B   | Wire                               | U515              | YWADS7806U   | IC                         |
| E106                 | YWCP501CP04B   | Wire                               | U516              | NJM2904M     | IC                         |
| M1                   | YW1B1A465A     | Joystick Angle                     | U517              | PTFPGA1      | IC                         |
| M2                   | YWV5RA0278A4   | Joystick Knob                      | U518,519          | SN74ALS273NS | IC                         |
| M3                   | YW2Y1A021A     | Joystick Collar                    | U520,521          | YWTD62083F   | IC                         |
| M4                   | YW5N1A022A     | Joystick Cover                     | U522              | YW78L05UATE2 | IC                         |
| M6                   | YW1A1A057B     | Cover                              | U530              | YWSN75179BPS | IC                         |
| M7                   | YW2R1A015A     | Iris Knob                          | U531              | TC74HC123AF  | IC                         |
| M8                   | YWTD446MR07A   | Button Guide                       | U532              | MC74HC165F   | IC                         |
| M9                   | YWA6JG0016B3   | Button (WHT)                       | U533              | YWTD62083F   | IC                         |
| M10                  | YWA6JC0017A4   | Button Guide (N4)                  | U534              | MC74HC04AF   | IC                         |
| M12                  | YW5E1A017A     | Switch Cushion (A)                 | Q43               | 2SD1819QRS   | Transistor                 |
| M13                  | YW5E1A018A     | Switch Cushion (B)                 | Q44               | 2SC3931-CD   | Transistor                 |
| M14                  | YWWLS160       | Locking Spacer                     | Q45               | 2SD1819QRS   | Transistor                 |
| M15                  | YW2Y1A022A     | Spacer                             | D501              | MA142K       | Diode                      |
| M17                  | YW1A1A054A     | Chassis                            | R193              | ERJ3GEYJ154  | Carbon 150K ohms 1/16W     |
| M18                  | SJ-5003        | Rubber Foot                        | R194              | ERJ3GEYJ104  | Carbon 100K ohms 1/16W     |
| M19                  | YW1A1A065A     | Blank Panel                        | R195              | ERJ3GEYJ332  | Carbon 3.3K ohms 1/16W     |
| M20                  | YW1A1A061A     | Rear Panel                         | R196              | ERJ3GEYJ222  | Carbon 2.2K ohms 1/16W     |
| M21                  | YWV2GA0065A4   | Cord Clamp                         | R197,198          | ERJ3GEYJ332  | Carbon 3.3K ohms 1/16W     |
| M23                  | △ YW7C1A025A   | Main Label for AW-RP505/USA/Canada | R199              | ERJ3GEYJ101  | Carbon 100 ohms 1/16W      |
| M24                  | △ YW7C1A026A   | Main Label for AW-RP505/B/G        | R200              | ERJ3GEYJ103  | Carbon 10K ohms 1/16W      |
| M25                  | △ YWV7MA1009A4 | EXT DC Label                       | R201              | ERJ3GEYJ472  | Carbon 4.7K ohms 1/16W     |
| M26                  | △ YWV7MB0099A4 | Screw Caution Label                | R202              | ERJ3GEYJ750  | Carbon 75 ohms 1/16W       |
| M27                  | △ YWV7MA0338A4 | See Manual Label                   | R501-525          | ERJ3GEYJ472  | Carbon 4.7K ohms 1/16W     |
|                      |                |                                    | R526-528          | ERJ3GEYJ104  | Carbon 100K ohms 1/16W     |
|                      |                |                                    | R529              | ERJ3GEYJ105  | Carbon 1M ohms 1/16W       |
|                      |                |                                    | R530              | ERJ3GEYJ101  | Carbon 100 ohms 1/16W      |
|                      |                |                                    | R531              | ERJ3GEYJ104  | Carbon 100K ohms 1/16W     |
|                      |                |                                    | R532              | ERJ3GEYJ222  | Carbon 2.2K ohms 1/16W     |
|                      |                |                                    | R533              | ERJ3GEYJ101  | Carbon 100 ohms 1/16W      |
|                      |                |                                    | R534              | ERJ3GEYJ201  | Carbon 200 ohms 1/16W      |

| REF. NO.                                             | PART NO.                                                                      | DESCRIPTION                                                            |                                                                                       |
|------------------------------------------------------|-------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| R535<br>R547<br>R548-562<br>R563<br>R564             | ERJ3GEYJ333<br>ERJ3GEYJ201<br>ERJ3GEYJ201<br>ERJ3GEY0R00<br>ERJ3GEYJ201       | Carbon<br>Carbon<br>Carbon<br>Carbon<br>Carbon                         | 33K ohms 1/16W<br>200 ohms 1/16W<br>200 ohms 1/16W<br>0 ohm 1/16W<br>200 ohms 1/16W   |
| R570-589<br>R590-612<br>R613-630<br>R631<br>R632,633 | ERJ3GEYJ201<br>ERJ3GEYJ472<br>ERJ3GEYJ201<br>ERJ3GEYJ273<br>ERJ3GEY0R00       | Carbon<br>Carbon<br>Carbon<br>Carbon<br>Carbon                         | 200 ohms 1/16W<br>4.7K ohms 1/16W<br>200 ohms 1/16W<br>27K ohms 1/16W<br>0 ohm 1/16W  |
| R634<br>R646,647<br>R648-652<br>R653,654<br>R655,656 | ERJ3GEYJ201<br>ERJ3GEYJ203<br>ERJ3GEYJ473<br>ERJ3GEYJ201<br>ERJ3GEYJ680       | Carbon<br>Carbon<br>Carbon<br>Carbon<br>Carbon                         | 200 ohms 1/16W<br>20K ohms 1/16W<br>47K ohms 1/16W<br>200 ohms 1/16W<br>68 ohms 1/16W |
| R657<br>R901-903<br>C131<br>C132<br>C133             | ERJ3GEY0R00<br>ERJ6GEY0R00<br>YWRVS1C470M<br>YWRVS1C220M<br>YW5CH100J5VB      | Carbon<br>Carbon<br>Electrolytic<br>Electrolytic<br>Ceramic            | 0 ohm 1/16W<br>0 ohm 1/10W<br>47 µF 16V<br>22 µF 16V<br>10 pF                         |
| C134,135<br>C136<br>C137<br>C138<br>C501-527         | YWRVS1C220M<br>YW5F2Z4Z1VB<br>YWRVJ1C221M<br>YWRVS1C220M<br>YGM1F104Z1ET      | Electrolytic<br>Ceramic<br>Electrolytic<br>Electrolytic<br>Ceramic     | 22 µF 16V<br>0.22 µF<br>220 µF 16V<br>22 µF 16V<br>0.1 µF 25V                         |
| C528<br>C529-532<br>C533,534<br>C535<br>C536         | YWRVS0J220M<br>YGM1F104Z1ET<br>YW5CH220J5VB<br>YGM1F105Z1AT<br>YWSK51A106MA   | Electrolytic<br>Ceramic<br>Ceramic<br>Ceramic<br>Tantalum              | 22 µF 6.3V<br>0.1 µF 25V<br>22 pF<br>1 µF 10V<br>10 µF 10V                            |
| C537-540<br>C541<br>C542-544<br>C545,546<br>C547     | YGM1F104Z1ET<br>YWSK41C475KA<br>YGM1F104Z1ET<br>YWSK31D225MRA<br>YWSK41C106MB | Ceramic<br>Tantalum<br>Ceramic<br>Tantalum<br>Tantalum                 | 0.1 µF 25V<br>4.7 µF 16V<br>0.1 µF 25V<br>2.2 µF 20V<br>10 µF 16V                     |
| C548-550<br>C551,552<br>C558-560<br>C565<br>C566     | YGM1F104Z1ET<br>YWRVS1C100M<br>YGM1F104Z1ET<br>YWSK41C475KA<br>YWSK41C106MB   | Ceramic<br>Electrolytic<br>Ceramic<br>Tantalum<br>Tantalum             | 0.1 µF 25V<br>10 µF 16V<br>0.1 µF 25V<br>4.7 µF 16V<br>10 µF 16V                      |
| C567<br>C568<br>C570<br>C571-573<br>C574             | YW5CH101J5VT<br>YWSK41C106MB<br>YW5CH470J5VT<br>YGM1F104Z1ET<br>YW5X103K5VT   | Ceramic<br>Tantalum<br>$\frac{\sqrt{f_1}}{f_2}$<br>Ceramic<br>Ceramic  | 100 pF<br>10 µF 16V<br>47 pF<br>0.1 µF 25V<br>0.01 µF                                 |
| C575-579<br>C590-593<br>CN101<br>P2<br>P601          | YGM1F104Z1ET<br>YGM1F104Z1ET<br>AXS628129P<br>YW53261-1490<br>YW53261-0690    | Ceramic<br>Ceramic<br>IC Socket<br>14-pin Connector<br>6-pin Connector | 0.1 µF 25V<br>0.1 µF 25V<br><br><br>                                                  |

| REF. NO.                             | PART NO.                                                                     | DESCRIPTION                                                                                     |
|--------------------------------------|------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| P603<br>P604<br>P605<br>P606<br>P607 | YW53261-0790<br>YW53261-1190<br>YW53261-1490<br>YW53261-1590<br>YW53261-1390 | 7-pin Connector<br>11-pin Connector<br>14-pin Connector<br>15-pin Connector<br>13-pin Connector |
| P608<br>P611<br>Y501<br>FL501<br>E1  | YW53261-1490<br>YW53261-0790<br>YWA75120MHZ<br>YWZJK5103-05<br>YWCP501YC01B  | 14-pin<br>7-pin Connector<br>Crystal Oscillator      20 MHz<br>Noise Filter<br>Wire             |
| E2                                   | YWCP501YC02B                                                                 | Wire                                                                                            |

**SW/CAM BOARD**

|            |              |                            |
|------------|--------------|----------------------------|
| PCB2 (RTL) | YWWRP55JKZ2A | Printed Circuit Board Assy |
| U1         | NJM2904M     | IC                         |
| U6-8       | YWMC14051BF  | IC                         |
| U9         | NJM2902M     | IC                         |
| U10        | NJM2904M     | IC                         |
|            |              |                            |
| U11        | YWMC74HC32AF | IC                         |
| U12        | MC74HC125AF  | IC                         |
| U13        | YWYMC14050BF | IC                         |
| U14        | YWNJM4556AM  | IC                         |
| U15        | MC74HC132AF  | IC                         |
|            |              |                            |
| U16,17     | NJM2903M     | IC                         |
| U18        | NJM2904M     | IC                         |
| U20        | MN18888CUL   | IC                         |
| U21        | YWMC14051BF  | IC                         |
| U22        | YWM51957BFP  | IC                         |
| Q1         | 2SB1218QRS   | Transistor                 |
| Q2,3       | 2SD1819QRS   | Transistor                 |
| Q4,5       | 2SB1218QRS   | Transistor                 |
| Q6,7       | 2SD1819QRS   | Transistor                 |
| Q8         | 2SB1219QRS   | Transistor                 |
|            |              |                            |
| Q9         | 2SD1819QRS   | Transistor                 |
| Q10-13     | 2SB1218QRS   | Transistor                 |
| D1         | MA142K       | Diode                      |
| D2         | YWERB83004   | Diode                      |
| D3         | MA142K       | Diode                      |

| REF. NO. | PART NO.     | DESCRIPTION       |                 | REF. NO. | PART NO.    | DESCRIPTION    |                 |
|----------|--------------|-------------------|-----------------|----------|-------------|----------------|-----------------|
| D4       | ERB83004     | Diode             |                 | R72,73   | ERJ3GEYJ153 | Carbon         | 15K ohms 1/16W  |
| D5,6     | MA143        | Diode             |                 | R74      | ERJ3GEYJ471 | Carbon         | 470 ohms 1/16W  |
| D7       | MA142K       | Diode             |                 | R75      | ERJ3GEYJ682 | Carbon         | 6.8K ohms 1/16W |
| D8       | LN238RPH     | LED               |                 | R76      | ERJ3GEYJ103 | Carbon         | 10K ohms 1/16W  |
| D9,11    | LN338GPH     | LED               |                 | R77      | ERJ3GEYJ203 | Carbon         | 20K ohms 1/16W  |
| D12      | MA142K       | Diode             |                 | R78      | ERJ3GEYJ471 | Carbon         | 470 ohms 1/16W  |
| D13      | MA143        | Diode             |                 | R79,80   | ERJ3GEYJ153 | Carbon         | 15K ohms 1/16W  |
| D14      | MA142K       | Diode             |                 | R81      | ERJ3GEYJ471 | Carbon         | 470 ohms 1/16W  |
| D15      | MA165        | Diode             |                 | R82      | ERJ3GEYJ682 | Carbon         | 6.8K ohms 1/16W |
| D16-21   | LN238RPH     | LED               |                 | R83      | ERJ3GEYJ103 | Carbon         | 10K ohms 1/16W  |
| R1       | ERJ3GEYJ911  | Carbon            | 910 ohms 1/16W  | R84      | ERJ3GEYJ203 | Carbon         | 20K ohms 1/16W  |
| R2       | ERJ3GEYJ103  | Carbon            | 10K ohms 1/16W  | R85,87   | ERJ3GEYJ103 | Carbon         | 10K ohms 1/16W  |
| R3       | ERJ3GEYJ303  | Carbon            | 30K ohms 1/16W  | R90      | ERJ3GEY0R00 | Carbon         | 0 ohm 1/16W     |
| R4       | ERJ3GEYJ103  | Carbon            | 10K ohms 1/16W  | R91      | ERJ3GEYJ473 | Carbon         | 47K ohms 1/16W  |
| R5       | ERJ3GEYJ181  | Carbon            | 180 ohms 1/16W  | R92      | ERJ3GEYJ101 | Carbon         | 100 ohms 1/16W  |
| R6       | ERJ3GEYJ203  | Carbon            | 20K ohms 1/16W  | R95      | ERJ3GEYJ473 | Carbon         | 47K ohms 1/16W  |
| R7       | ERJ3GEYJ103  | Carbon            | 10K ohms 1/16W  | R96      | ERJ3RHD202  | Metal          | 2K ohms 1/16W   |
| R8       | ERJ3GEYJ152  | Carbon            | 1.5K ohms 1/16W | R97      | ERJ3RHD472  | Metal          | 4.7K ohms 1/16W |
| R9       | YWR9L11420K2 | Variable Resistor | 20K ohms        | R98      | ERJ3GEYJ510 | Carbon         | 51 ohms 1/16W   |
| R10      | ERJ3GEYJ152  | Carbon            | 1.5K ohms 1/16W | R99      | ERJ3GEYJ473 | Carbon         | 47K ohms 1/16W  |
| R11-20   | ERJ3GEYJ470  | Carbon            | 47 ohms 1/16W   | R100     | ERJ3GEY0R00 | Carbon         | 0 ohm 1/16W     |
| R21,22   | ERJ3GEYJ621  | Carbon            | 620 ohms 1/16W  | R101     | ERJ3GEYJ473 | Carbon         | 47K ohms 1/16W  |
| R23,24   | ERJ3GEYJ331  | Carbon            | 330 ohms 1/16W  | R102,103 | ERJ3GEYJ221 | Carbon         | 220 ohms 1/16W  |
| R25-34   | ERJ3GEYJ470  | Carbon            | 47 ohms 1/16W   | R106     | ERJ3GEYJ102 | Carbon         | 1K ohms 1/16W   |
| R35-44   | ERJ3GEYJ331  | Carbon            | 330 ohms 1/16W  | R107     | ERJ3GEYJ104 | Carbon         | 100K ohms 1/16W |
| R45,46   | ERJ3GEYJ153  | Carbon            | 15K ohms 1/16W  | R108     | ERJ3GEYJ101 | Carbon         | 100 ohms 1/16W  |
| R47      | ERJ3GEYJ273  | Carbon            | 27K ohms 1/16W  | R109     | ERJ3GEYJ473 | Carbon         | 47K ohms 1/16W  |
| R48      | ERJ3GEYJ153  | Carbon            | 15K ohms 1/16W  | R110     | ERJ3GEYJ391 | Carbon         | 390 ohms 1/16W  |
| R49      | ERJ3GEYJ152  | Carbon            | 1.5K ohms 1/16W | R111     | ERJ3GEYJ911 | Carbon         | 910 ohms 1/16W  |
| R50      | YWRK9D11320K | Variable Resistor | 20K ohms        | R112-117 | ERJ3GEYJ331 | Carbon         | 330 ohms 1/16W  |
| R51      | ERJ3GEYJ152  | Carbon            | 1.5K ohms 1/16W | R118     | ERJ3GEYJ102 | Carbon         | 1K ohms 1/16W   |
| R52      | ERJ3GEYJ104  | Carbon            | 100K ohms 1/16W | R119-122 | ERJ3GEYJ104 | Carbon         | 100K ohms 1/16W |
| R53      | ERJ3GEYJ473  | Carbon            | 47K ohms 1/16W  | R123     | ERJ3RHD103  | Metal          | 10K ohms 1/16W  |
| R54      | ERJ3GEYJ103  | Carbon            | 10K ohms 1/16W  | R124     | ERJ3RHD303  | Metal          | 30K ohms 1/16W  |
| R55      | ERJ3GEYJ104  | Carbon            | 100K ohms 1/16W | R125     | ERJ3RHD103  | Metal          | 10K ohms 1/16W  |
| R56,57   | ERJ3GEYJ153  | Carbon            | 15K ohms 1/16W  | R128,129 | ERJ3GEY0R00 | Carbon         | 0 ohm 1/16W     |
| R58      | ERJ3GEYJ471  | Carbon            | 470 ohms 1/16W  | R130     | EXBLD8503G  | Block Resistor | 50K ohms 1/16W  |
| R59      | ERJ3GEYJ473  | Carbon            | 47K ohms 1/16W  | R131     | ERJ3GEYJ101 | Carbon         | 100 ohms 1/16W  |
| R60      | ERJ3GEYJ471  | Carbon            | 470 ohms 1/16W  | R132     | ERJ3GEYJ473 | Carbon         | 47K ohms 1/16W  |
| R61      | ERJ3GEYJ153  | Carbon            | 15K ohms 1/16W  | R133     | ERJ3GEYJ153 | Carbon         | 15K ohms 1/16W  |
| R62      | ERJ3GEYJ473  | Carbon            | 47K ohms 1/16W  | R134     | ERJ3GEYJ911 | Carbon         | 910 ohms 1/16W  |
| R63      | ERJ3GEYJ153  | Carbon            | 15K ohms 1/16W  | R141-143 | ERJ3GEYJ102 | Carbon         | 1K ohms 1/16W   |
| R64      | ERJ3GEYJ152  | Carbon            | 1.5K ohms 1/16W | R144     | ERJ3GEYJ272 | Carbon         | 2.7K ohms 1/16W |
| R65      | YWRK9D11320K | Variable Resistor | 20K ohms        | R145     | ERJ3RHD104  | Metal          | 100K ohms 1/16W |
| R66      | ERJ3GEYJ152  | Carbon            | 1.5K ohms 1/16W | R146     | ERJ3RHD302  | Metal          | 3K ohms 1/16W   |
| R67      | ERJ3GEYJ152  | Carbon            | 1.5K ohms 1/16W | R147     | ERJ3RHD473  | Metal          | 47K ohms 1/16W  |
| R68      | YWRK9D11310K | Variable Resistor | 10K ohms        | R148     | ERJ3RHD302  | Metal          | 3K ohms 1/16W   |
| R69      | ERJ3GEYJ152  | Carbon            | 1.5K ohms 1/16W | R149     | ERJ3RHD473  | Metal          | 47K ohms 1/16W  |
| R70      | ERJ3GEYJ153  | Carbon            | 15K ohms 1/16W  | R150     | ERJ3RHD104  | Metal          | 100K ohms 1/16W |
| R71      | ERJ3GEYJ471  | Carbon            | 470 ohms 1/16W  | R151-160 | ERJ3GEYJ102 | Carbon         | 1K ohms 1/16W   |

| REF. NO. | PART NO.     | DESCRIPTION  |                  | REF. NO. | PART NO.     | DESCRIPTION  |                  |
|----------|--------------|--------------|------------------|----------|--------------|--------------|------------------|
| R161-167 | ERJ3GEYJ473  | Carbon       | 47K ohms 1/16W   | C21      | SK31C476MRD0 | Tantalum     | 47 $\mu$ F 16V   |
| R168-171 | ERJ3GEYJ272  | Carbon       | 2.7K ohms 1/16W  | C22      | YWRVJ1E101M  | Electrolytic | 100 $\mu$ F 25V  |
| R172     | ERJ3GEYJ473  | Carbon       | 47K ohms 1/16W   | C23-25   | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  |
| R173     | ERJ3GEYJ273  | Carbon       | 27K ohms 1/16W   | C26      | YWRVS1H1R0M  | Electrolytic | 1 $\mu$ F 50V    |
| R175,176 | ERJ3GEYJ102  | Carbon       | 1K ohms 1/16W    | C27,28   | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  |
| R177-180 | ERJ3GEYJ473  | Carbon       | 47K ohms 1/16W   | C29,30   | YWRVS1H1R0M  | Electrolytic | 1 $\mu$ F 50V    |
| R181,182 | ERJ3RHD104   | Metal        | 100K ohms 1/16W  | C31      | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  |
| R183     | ERJ3GEYJ472  | Carbon       | 4.7K ohms 1/16W  | C32      | YWRVS1H1R0M  | Electrolytic | 1 $\mu$ F 50V    |
| R184     | ERJ3GEYJ273  | Carbon       | 27K ohms 1/16W   | C33,34   | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  |
| R185,187 | ERJ3GEYOR00  | Carbon       | 0 ohm 1/16W      | C35      | YWRVS0J470M  | Electrolytic | 47 $\mu$ F 6.3V  |
| R188     | ERJ3GEYJ472  | Carbon       | 4.7K ohms 1/16W  | C36      | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  |
| R190     | ERJ3GEYJ103  | Carbon       | 10K ohms 1/16W   | C37-39   | YWRVS0J470M  | Electrolytic | 47 $\mu$ F 6.3V  |
| R192     | ERJ3GEYJ472  | Carbon       | 4.7K ohms 1/16W  | C40,41   | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  |
| R193     | ERJ3RHD123   | Metal        | 12K ohms 1/16W   | C42-44   | YW5CH101J5VT | Ceramic      | 100 pF           |
| R194     | ERJ3RHD472   | Metal        | 4.7K ohms 1/16W  | C45      | YWRVS1C470M  | Electrolytic | 47 $\mu$ F 16V   |
| R195     | ERJ3GEYJ182  | Carbon       | 1.8K ohms 1/16W  | C46      | YWRVS0J470M  | Electrolytic | 47 $\mu$ F 6.3V  |
| R196-199 | ERJ3GEYJ473  | Carbon       | 47K ohms 1/16W   | C47      | YW5CH101J5VT | Ceramic      | 100 pF           |
| R202     | ERJ3GEYJ153  | Carbon       | 15K ohms 1/16W   | C48      | YWRVS0J101M  | Electrolytic | 100 $\mu$ F 6.3V |
| R203-205 | ERJ3GEYJ473  | Carbon       | 47K ohms 1/16W   | C49,50   | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  |
| R206     | ERJ3GEYJ470  | Carbon       | 47 ohms 1/16W    | C51      | YWRVP0J470M  | Electrolytic | 47 $\mu$ F 6.3V  |
| R207     | ERJ3GEYJ272  | Carbon       | 2.7K ohms 1/16W  | C53      | YW5CH101J5VT | Ceramic      | 100 pF           |
| R208     | ERJ3GEYJ911  | Carbon       | 910 ohms 1/16W   | C54      | YGM1B102K1HT | Ceramic      | 1000 pF 50V      |
| R209     | ERJ3GEYJ473  | Carbon       | 47K ohms 1/16W   | C55      | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  |
| R210     | ERJ3GEYJ153  | Carbon       | 15K ohms 1/16W   | C56      | YWRVP1A330M  | Electrolytic | 33 $\mu$ F 10V   |
| R211     | ERJ3GEYJ473  | Carbon       | 47K ohms 1/16W   | C57,58   | YWRVS0J470M  | Electrolytic | 47 $\mu$ F 6.3V  |
| R212     | ERJ3GEYJ153  | Carbon       | 15K ohms 1/16W   | C59      | YWRVS1C470M  | Electrolytic | 47 $\mu$ F 16V   |
| R213     | ERJ3GEYJ911  | Carbon       | 910 ohms 1/16W   | C60,61   | YW5CH151J5VT | Ceramic      | 150 pF           |
| R214     | ERJ3GEYJ473  | Carbon       | 47K ohms 1/16W   | C62      | YWRVS0J470M  | Electrolytic | 47 $\mu$ F 6.3V  |
| R215     | ERJ3GEYJ153  | Carbon       | 15K ohms 1/16W   | C63      | YWRVS0J101M  | Electrolytic | 100 $\mu$ F 6.3V |
| R216     | ERJ3GEYJ911  | Carbon       | 910 ohms 1/16W   | C64      | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  |
| R217     | ERJ3GEYJ473  | Carbon       | 47K ohms 1/16W   | C67      | YW5CH101J5VT | Ceramic      | 100 pF           |
| R218     | ERJ3GEYJ153  | Carbon       | 15K ohms 1/16W   | C68      | YWRVS1C470M  | Electrolytic | 47 $\mu$ F 16V   |
| R219     | ERJ3GEYJ911  | Carbon       | 910 ohms 1/16W   | C69      | YWRVS0J470M  | Electrolytic | 47 $\mu$ F 6.3V  |
| R221,222 | ERJ3GEYJ153  | Carbon       | 15K ohms 1/16W   | C71      | YW5CH151J5VT | Ceramic      | 150 pF           |
| C1-3     | YWRVS0J470M  | Electrolytic | 47 $\mu$ F 6.3V  | C72      | YWSK41A476MC | Tantalum     | 47 $\mu$ F 10V   |
| C4       | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  | C73      | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  |
| C5,6     | YWRVS0J470M  | Electrolytic | 47 $\mu$ F 6.3V  | C74,75   | YWSK41A476MC | Tantalum     | 47 $\mu$ F 10V   |
| C7       | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  | C76      | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  |
| C8       | YWRVS1H1R0M  | Electrolytic | 1 $\mu$ F 50V    | C77      | YWRVJ1C221M  | Electrolytic | 220 $\mu$ F 16V  |
| C9,10    | YWRVS0J470M  | Electrolytic | 47 $\mu$ F 6.3V  | C78      | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  |
| C11      | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  | C79      | YWRVS1H1R0M  | Electrolytic | 1 $\mu$ F 50V    |
| C12      | YWRVS0J101M  | Electrolytic | 100 $\mu$ F 6.3V | C81      | YGM1C330J1HT | Ceramic      | 33 pF 50V        |
| C13      | YWRVJ1C101M  | Electrolytic | 100 $\mu$ F 16V  | C82      | YWRVS1C470M  | Electrolytic | 47 $\mu$ F 16V   |
| C14      | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  | C85,86   | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  |
| C15      | YWRVJ1C101M  | Electrolytic | 100 $\mu$ F 16V  | C87      | YWSK1V104KRA | Tantalum     | 0.1 $\mu$ F 35V  |
| C16      | YWRVJ1E101M  | Electrolytic | 100 $\mu$ F 25V  | C88-90   | YWRVS0J470M  | Electrolytic | 47 $\mu$ F 6.3V  |
| C17      | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  | C91      | YWRVS1H1R0M  | Electrolytic | 1 $\mu$ F 50V    |
| C18      | YWRVS0J101M  | Electrolytic | 100 $\mu$ F 6.3V | C92      | YWRVJ1C221M  | Electrolytic | 220 $\mu$ F 16V  |
| C19      | YWRVJ1C101M  | Electrolytic | 100 $\mu$ F 16V  | C93      | SK31C476MRD0 | Tantalum     | 47 $\mu$ F 16V   |
| C20      | YGM1F104Z1ET | Ceramic      | 0.1 $\mu$ F 25V  | L1-3     | YWNL32100J   | Coil         | 10 $\mu$ H       |

| REF. NO.          | PART NO.     | DESCRIPTION                | REF. NO.                               | PART NO.     | DESCRIPTION                                    |
|-------------------|--------------|----------------------------|----------------------------------------|--------------|------------------------------------------------|
| L4                | YWNL321R0J   | Coil 1.0 $\mu$ H           | P7                                     | YWP2262      | BNC Connector                                  |
| S1-8              | YWSSSF022P9N | Slide Switch               | P101                                   | YWCP505RE01A | Wire                                           |
| S9-13             | 15EL1220000  | Switch                     | P102                                   | YWCP505RE02A | Wire                                           |
| S14               | 13AL0600040  | Switch D                   | P103                                   | YWCP505RE03A | Wire                                           |
| S15               | 13AL0600050  | Switch Y                   | P105                                   | YWCP501RE04A | Wire                                           |
| S16-20            | 15EL1220000  | Switch                     | <b>JOYSTICK BOARD</b>                  |              |                                                |
| S21-25            | 13AL0600000  | Switch                     | PCB4 (RTL)                             | YWWRP51JKY1A | Printed Circuit Board Assy                     |
| S26,28            | SSSF022P9N   | Slide Switch               | R1-3                                   | YWRKJXC10KB2 | Variable Resistor 10K ohms                     |
| S29               | SSSF023P9N   | Slide Switch               | R4-31                                  | ERJ8GEY0R00  | Carbon 0 ohm 1/16W                             |
| S30               | SSSF022P9N   | Slide Switch               | SW1-6                                  | SSSS22211    | Slide Switch                                   |
| S31,32            | YWSKEVAC     | Tact Switch                | P1                                     | YW53254-0710 | 7-pin Connector                                |
| S33               | SSSF024P9N   | Slide Switch               | <b>ACCESSORY PARTS/PACKAGING PARTS</b> |              |                                                |
| S34               | SSSF023P9N   | Slide Switch               | M30                                    | YWT050803    | Polyethylene Bag                               |
| S35               | YWS2150      | Rotary Switch              | M31                                    | YW1B1A466A   | Joint Angle                                    |
| S36               | SSSB022P6N   | Slide Switch               | M32                                    | YW7G1A653A   | Label                                          |
| S37-39            | 13AL0600000  | Switch                     | M33                                    | YWPE26X40C05 | Polyethylene Bag                               |
| S40               | SSSF022P6N   | Slide Switch               | M34                                    | YW7J1A077A   | Operating Instructions for AW-RP505/USA/Canada |
| P2                | YWCP501SW02A | Wire                       |                                        | YW7J1A078A   | Operating Instructions for AW-RP505/B/G        |
| P101              | YWCP501SW03A | Wire                       | M35                                    | YWV22XPRB99S | Service Center List for AW-RP501/USA/Canada    |
| P102              | YWCP501SW04A | Wire                       | M37                                    | YWA5PA0074A3 | Rack Angle                                     |
| P103              | 53254-0210   | Connector                  | M38                                    | YWT20X25C03  | Polyethylene Bag                               |
| P104              | YWCP501SW05A | Wire                       | M39                                    | XZB35X50C05  | Polyethylene Bag                               |
| P105              | YWCP501SW06A | Wire                       | M40                                    | YW0C1A009AA  | Packaging Ass'y                                |
| P106              | YWCP501SW07A | Wire                       | M41                                    | YWV8FA0137A4 | Packaging Label for AW-RP501/USA/Canada        |
| P107              | YWCP501SW08A | Wire                       |                                        | YWV8FA0140A4 | Packaging Label for AW-RP505/B/G               |
| P108              | 53261-0890   | Connector                  | M42                                    | YWV8FA0070A4 | Packaging Label                                |
| SF1 $\Delta$      | YWSSFC2AT4   | Current Fuse 2A            |                                        |              |                                                |
| Y1                | EFOGC8004A4  | Resonator                  |                                        |              |                                                |
| E1                | YWL3071A02A5 | Cable                      |                                        |              |                                                |
| E2                | YWCP501SW09A | Wire                       |                                        |              |                                                |
| M11               | YWLH57       | Spacer                     |                                        |              |                                                |
| <b>REAR BOARD</b> |              |                            |                                        |              |                                                |
| PCB3 (RTL)        | YWWRP55JKY2A | Printed Circuit Board Assy |                                        |              |                                                |
| R1,2              | ERDS2TJ750   | Carbon 75 ohms 1/4W        |                                        |              |                                                |
| R5                | ERDS2T0      | Carbon 0 ohm 1/4W          |                                        |              |                                                |
| R6                | ERDS2TJ750   | Carbon 75 ohms 1/4W        |                                        |              |                                                |
| C1-8              | ECKF1E103ZV  | Ceramic 0.01 $\mu$ F 25V   |                                        |              |                                                |
| C9-20             | 400103XKT    | Ceramic 0.01 $\mu$ F       |                                        |              |                                                |
| P1                | ML40S1CX6P   | 6-pin Terminal             |                                        |              |                                                |
| P2                | 285D9880J101 | Jack                       |                                        |              |                                                |
| P5                | YWM0092      | 8-pin DIN Connector        |                                        |              |                                                |
| P6                | YWP2324B     | BNC Connector              |                                        |              |                                                |